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Let Us Get Right Down to Business

THERE is one false note in our professional life that I desire to bring to your attention, dear reader. I refer to the pretense that the business side of the practice of medicine is something contemptible, and that it should not be referred to overly much in our journals nor discussed openly with our patients. We prate much of the humanities; we devote pages and pages to professional self-praise; and we try to impress upon the public that the medical man is living a life of heroic self-sacrifice. Can we complain, then, if the public takes us at our word and makes our voluntary sacrificial immolation more convenient by multiplying charities calculated to take from us the opportunities to earn a reasonable amount of money?

Let us get right down to business in this matter of the physician's right to earn a decent living. Let us be fair and square, and open and aboveboard. Some men enter the practice of medicine because they love it; others do so because they believe it opens for them the line of least resistance toward success, whether expressed in money or honor; yet practically all must look upon it, once they are safely launched upon the rough sea of medical life, as an honorable means of acquiring a competence. *The doctor's income is the keystone in his professional career.* Why should we be ashamed to admit this fact? Why do we hesitate to discuss the reasons why so many of us are failing "to make ends meet," as undoubtedly is the case?

It is because we believe this business side is of vital importance that some time ago we decided to make a special study of its problems in these pages. Other journals have given them little attention. About the only topics of a character affecting the practitioner's pocket book much discussed in our journals or at our society meetings have been these: the fee-splitting evil, which has been written about mainly from the standpoint of the city specialist; the regulation of nostrums, the discussion of which centers around the activities of the Council on Pharmacy and Chemistry; the regulation and suppression of medical colleges, principally promoted by the Council on Education of the American Medical Association; and the doctor's investments, so ably presented by the editor of *The Medical World*.

While the preceding problems are all important, they do not so vitally concern the general practitioner as a number of others of an economic character to which I shall invite your attention in succeeding issues of CLINICAL MEDICINE. Some of these problems seem to me of the greatest significance, since they undoubtedly are evidences that we are entering the incubation-period of a serious class-struggle affecting us deeply, and the outcome of which will determine the economic integrity as well as the intellectual freedom of the doctor of the next generation.

In order to get some information at first hand concerning conditions in the field, I mailed, some months ago, to several hundred physicians a letter propounding a number of questions that I believed of interest to the profession. These letters were addressed to men whose names were picked at random from the A. M. A. Medical Directory.

I received 126 replies from thirty states and the District of Columbia, every section of the country being represented. Forty-two of these letters came from the larger cities; 84 from small cities, villages and rural communities. While the number of replies is not large enough to warrant many deductions that may be of value, nevertheless the opinions given were most interesting.

For instance, I asked: "What is the average income of the physicians with whom you are sufficiently acquainted to give accurate information?"

The answers to this question were somewhat surprising.

It has been repeatedly stated (on whose authority I do not know) that the average income of the American physician is about $700 a year. My correspondents told a different story. The incomes reported ran all the way from $500 to $25,000 a year; yet, only three men reported less than $1000 a year, and two of these lived in Oklahoma. One country practitioner from that state reported $500, evidently his personal income; his community had been almost ruined by a succession of dry seasons.

The average of the incomes reported, excluding some two or three which ran above $15,000, was (accepting the minimum figures given) $2340 a year. It may be that this average is high. One physician, who declined to answer this question, said: "We are such cheerful liars that I couldn't even guess." Perhaps his hypothesis explains the result of the straw-vote. However, if we exclude the young men just out of college and the superannuated physicians and those retired from practice, I am personally convinced the figures are not far out of the way.

This record, however, should be qualified to a certain degree. It is not save to assume that an income of $2000 or more annually means prosperity, for *70 percent of those reporting also testified that their incomes had either decreased or were stationery*; and of the 30 percent reporting an increase during the last decade the majority took occasion to point out that their expenditures had increased as rapidly or even more rapidly than their incomes.

The physician who wishes to "stay in the game" nowadays is compelled to buy books, subscribe for magazines, purchase instruments and apparatus, keep up an expensive office, install a telephone, join the clubs and societies, subscribe to the charities, and run an automobile. These expenditures can be depended upon to wipe out any surplus.

The significant point in all this is, that the tendency of the doctor's net income is downward, not upward, in spite of the restraint already being placed upon competition. And this brings me again to the purpose of this article, which is, to insist that it is time that we began to put brains, and energy, and determination to do something practical, into the great question now presenting itself to us all:

How shall we maintain the economic integrity of the doctor?

We are going to open up this great subject and discuss it from a number of angles. We are going to invite some able men, men who have given the matter thought, to submit their opinions upon its various phases; and we want you—*you* the reader of this—to participate in the discussion. To get right down to the heart of the situation, let us try to help one another to answer this question:

"*How can I (through honorable service) increase my income?*

We will try to direct this discussion from month to month through the editorial pages. Every issue of THE CLINIC will contain something upon this subject. Among the topics that we shall take up there will be: "The Doctor's Fees;" "Accounts and Collections;" "What Shall I Do with the Dead Beat?" "Competition or Cooperation?" "Medical Partnerships;" "Dealing with the Hospital and Dispensary;" "Lodge- and Contract-Practice;" "My Relations with the Druggist;" "Business Education for Business Doctors;" "Legitimate Publicity;" "Education—and More Education;" "How I May Fit Myself for Specialty Work—at Home;" "Fitting Up an Office;" "Laboratory Aids to Success;" "Dobbin—or a Car?" "Politics in Medicine and Medical Politics;" "Organized Effort for the Common Good;" "Legislation Affecting the Doctor's Interests."

These are a few of the topics that occur to us now. Be thinking about them—and *be thinking about your own business troubles.*

In this series of articles and editorials, which we desire to make a leading feature of CLINICAL MEDICINE for the coming year, we desire to help you find the solution for your difficulties. Somehow we feel that no other medical journal in the field stands as close to its readers as does our own; and the reason for this is that we sincerely and deeply feel for and sympathize with every man who opens his heart to us, and we earnestly try to help him whenever it is within our power.

But, we want to reach out farther, to touch the lives of others for their good—to increase

our own capacity for service. We can all of us do that, if we have the will. Let us try. This "program" represents a portion of our own effort.

The rising physician must be one who can resolutely withstand temptations to wander from the path of rectitude, ethics, altruism, morality. The practice of medicine should be conducted on a high professional plane.—The Medical World.

EMETINE IN DYSENTERY

Since the Portuguese discovered the little plant in use by the Indians of Brazil, ipecacuanha has been one of the most highly valued drugs in the materia medica. Its first notable application, curiously enough, was in the treatment of dysentery, the malady that, in one of its forms, has furnished the latest triumph of this drug. At the same time ipecac affords us in this particular application, another striking example of the possibilities of active-principle therapy.

Centuries have elapsed since King Louis was cured of his dysentery by ipecac. Many vicissitudes the remedy has seen since; lauded at one time to the skies as a priceless gem, and then, again, denounced as worthless. But in two directions patient investigators have been at work and their combined results have at last cleared away the uncertainties surrounding it, and established the truth.

In the tropics, dysentery is rife, and deadly. The physicians of India gave ipecacuanha and found large doses effective, provided they could be retained by the stomach. They succeeded fairly by administering the powdered root in dram-doses enclosed in capsules, these being swallowed without water, the patient being made to lie prone without stirring for half an hour, with sometimes a hypodermic morphine injection over the epigastrium. If the dose of ipecac was vomited, a similar one was administered immediately afterward, taking advantage of the period of exhaustion of the stomach's irritability following upon the exertion. If the drug was retained, the cure of the patient often followed. That very often the powders were not retained was shown by the further efforts necessitated.

Meantime chemistry had ascertained that the most important principle of ipecacuanha was an alkaloid, and this received the name emetine. Inasmuch as the drug cured dysentery, provided emesis did not occur, it naturally occurred to clinicians to extract the emetine from the root and administer the residue, ascribing the curative power to some other, unknown, principle in the substance.

The trials of deemetized ipecac were successful in part; this might be owing to imperfect extraction of the emetine, or else to the presence of the other ipecacuanha alkaloid, cephaeline. Our own experiments have shown that, while the latter principle is more acrid and disagreeable than emetine, the difference is not as great as the textbooks assert; while remedially they are not far apart. Still, the preponderence of bedside experience was so far against the deemetinized ipecac that further efforts were necessary in the search for the effective constituent.

In the meantime the pathologists had made a notable discovery; namely, that no single organism was responsible for the engendering of dysentery, but that at least two were capable of inducing acute infective coloproctitis. One of these belonged to the animal order, the ameba of dysentery; the other to the plant-world, the Shiga bacillus.

This recent discovery pointed to a reason for the failure of ipecacuanha in some instances, for experiments disclosed it to be effective especially in the ameboid form.

The next step in solving the riddle, was the final one, and the triumph was owing precisely to the application of our active-principle method—the pure alkaloid emetine was injected hypodermically and it proved a cure so certain and unfailing for ameboid dysentery as to have few parallels in drug medication. When there was apparent failure, the patient perishing in a relapse or from hepatic abscess, it was ascertained that the Shiga bacillus, associated with or following the attack of the ameba, was the cause of the death. The amebas invariably were destroyed by full doses of emetine.

The establishment of this truth largely is the work of Rogers, of Calcutta, the brilliant therapeutist who already had demonstrated the cure of Asiatic cholera by means of intestinal antiseptics. Not only this, but Rogers had succeeded in having his results instantly accepted without question, without exciting the senseless, rabid opposition usually evoked by any approving word for this method or the better-known internal antiseptics.

This result he accomplished by astutely giving another name to the method and by using a new agent, the permanganate of calcium! Meanwhile hundreds of common, everyday American doctors had found the cure for dysenteries in the application of the "clean-out, clean-up and keep-clean" maxim,

by means of calomel and laxative salines, followed by the sulphocarbolates.

During its era of depression, ipecac survived, although it seemed to be limited to its applications as an emetic and expectorant.

Provided one secured ipecac "of good quality," "fresh," "active," it proved an effective mild emetic, acting nicely in children, and the drug obtained a firm hold in domestic medication. With the advent of emetine, however, all this uncertainty is past. We have learned to limit its use as an expectorant to the early stages of respiratory catarrhs, when emetine relaxes the vascular tension and hastens the mucous discharge, "loosening" the cough.

The value of ipecac as a means of inciting the secretion of digestive fluids is beyond computation. It is an incitant, not an excitant, when given correctly—that is, it induces healthy, normal secretions. In this respect its applications are so numerous as to render emetine one of our most used remedies, especially in the innumerable digestive maladies of children. In that long series of experiments in which the child, beginning by testing the edibility of everything it can get into its mouth, at last learns what is digestible, ipecac obviates many results of unsuccessful trials.

Out of this grew the use of emetine as a remedy for alcoholism, for which application of the alkaloid this writer is responsible. He observed that in certain cases of periodic drunkenness, for some days before the patient went on his spree his stools became acholic and offensive. A full dose of emetine (5 to 10 milligrams) cleared the alimentary canal and restored hepatic irritability, and the spree was prevented.

Since the alkaloid is applicable only in the condition above described, and these cases form but a small proportion of alcoholics, failure was certain when the remedy was applied indiscriminately. Under suitable circumstances it is as sure as it is in amebic dysentery.

But to return to the use of emetine in dysentery—be sure to read the record of experience recorded by Dr. Roemer, in his article published elsewhere in this number of CLINICAL MEDICINE. Not only does it show that we have in emetine a remedy of specific value in amebic dysentery, but it also shows that it may be given by the buccal as well as by the subcutaneous route with every hope of success.

There must be thousands of intractable cases of amebic dysentery in our own Southland. The exact diagnosis the clinical laboratory can easily determine. The cause once known, the possibility of cure no longer seems problematic.

It is one of the essentials to success that the physician should grasp every opportunity and make the most of it. If he would look upon every case he is called upon to treat as a problem to be solved he would find in it scientific work of absorbing interest, and it would bring more work every time.

ACCURACY OF DIAGNOSIS IS POSSIBLE FOR EVERY PHYSICIAN

Are you quite sure, dear general practitioner, everywhere, that you are living up to your privileges—not to say your obligations—in these days of modern advances in diagnostic methods? Do you avail yourself, to say nothing of giving your patients the benefit, as much as you might, of all the means that twentieth-century science has placed at your command for making a thorough and exhaustive diagnosis?

A very difficult matter, you say, for the general practitioner under average conditions. One can hardly expect the practicing physician, especially in small towns and rural districts, to maintain at his hand all the facilities and opportunities and paraphernalia for carrying out the rather complex procedures of clinical diagnosis as they prevail in these days of exacting precision. Some of these procedures, indeed, are virtually impossible of effective application except in a well-equipped clinical laboratory, such as one can scarcely expect a practicing physician to maintain, and under conditions of control such as are only to be attained in a well-conducted hospital or sanitarium.

All of which is true. But if its admission implies that the general practitioner, on the firing line, is to be cut off from practical participation in these diagnostic methods, then are they null and void and fail of the very purpose which they were intended to serve. And if it be true that practicing physicians throughout the country are cutting themselves off from a share in the advantages which modern diagnostic agencies afford, then it is time that some system be adopted of dealing with patients in every-day practice which will insure both the physician and the patient deriving the full benefit of all that modern medical science has to offer in the matter of diagnosis.

I think there is, here, a very real and practical problem, which deserves attention. As medical scientists, we are all justly proud of

the tremendous strides that have been made in recent years in the development of diagnostic methods of precision. The fact is that from this scientific standpoint the art of diagnosis has almost reached the state of an exact science. At all events, in a large proportion of diseased conditions with which we have to do, it is nowadays scientifically possible to make a positive "Q.E.D." What is now needed, as it seems to me, is that the profession should evolve, from the utilitarian side, some adequate system of utilizing these possibilities so as to get out of them, for doctor and patient, their full quota of practical and economic advantage.

The most effective, if not, indeed, the only way of bringing this about, I believe, is by applying to it the same principle of cooperation that has already been successfully applied to the other recent evolutions of medicine—to specialism, and surgery, and the like—and which pervades, in fact, every department of modern work. It is quite true that no one man, alone and unassisted, can properly carry out a thorough and systematic routine of diagnosis, such as every patient suffering from any serious condition, or suspected to be so suffering, is nowadays entitled.

Such a diagnostic course would, in many instances, tax the resources of a comprehensive laboratory and a corps of trained investigators. But these are days of cooperative effort; and there is no reason why the resources of such an institution and such a corps should not be taxed. It is equally true that the general practitioner frequently finds hinself unable, by himself, to carry out an adequate form of treatment, so that he is obliged to remove his patient to a hospital, frequently in some distant city, and call in the services of a surgeon, and an anesthetist, and a corps of surgical nurses, and impose upon the patient the necessity of laying up in the hospital for several days.

There is no reason why the same system should not be followed in the making of obscure and difficult diagnoses. Indeed, so far as I can see, it must be followed if the doctor wishes to avail himself and his patient of the limit of modern diagnostique. All that is needed is that the physician should boldyl institute such a system of dealing with his patients—to which, I am confident, he will encounter no general opposition, but, on the contrary, will find that it is met half-way by the spirit of the times. It is no longer necessary to the doctor's prestige and influence that he should pretend to be all-sufficient in himself and by himself. Nobody in these days expects him to be so; rather, people look askance at the doctor who does so pretend. But they do expect him to fulfill the office of an alert, well-informed and conscientious agent or representative of his science, who will procure for them, where he himself is quite justifiably unable to render it, the best service that modern medical science can furnish.

In many instances the making of correct diagnosis is a matter of several days, and demands, as already intimated, expert attention and conditions of control such as can only be attained by having the patient under continuous observation and restriction in a hospital, and the cooperative work of two or three investigators working together on the case. In such instances the physician should not hesitate to impress this upon his patient, and get his cooperation in bringing it about, just as he does in the event of a surgical operation. As stated, he will find the ground ready for this kind of educational culture; it is just what people expect and demand.

Nor will the physician find any serious obstacle to the financial aspect of such a system. In the main patients are ready and willing to pay, and pay well, for thorough, painstaking diagnosis, if they are once assured that they are getting the goods. In short, the doctor will find that by such a course his economic and professional interests are greatly enhanced. I am sure that much of the unsatisfactory economic condition which prevails in the rank and file of medicine today is due to the failure of the general practitioner to avail himself to the full of the splendid advantages that his science stands ready to afford him. With Ruskin, "I do not wonder at what men suffer, but I wonder at what they miss."

I do not mean, of course, that this kind of cooperative routine should be followed with every patient. In many, doubtless the majority of cases, the doctor is perfectly capable of carrying out his own diagnostic procedures. Most of the cases that he is called upon to treat are, happily, mild and simple, easily diagnosed and readily cured. But in the exceptional and obstinate cases of diagnosis, as in the rare and difficult cases of treatment, it is both his privilege and his obligation to avail himself and his patient of the cooperative facilities that are provided in the present-day centers of medicine. Nor does this always involve the removal of the patient to a hospital for observation and control, as suggested above. There are many more instances in which this cooperative assistance

may be invoked by proxy. A urinalysis, a little more thorough than the physician himself is in a position to make; a blood-count; the identification of a suspected tissue; an examination of the sputum; will many times give the clue to an obscure and unmanageable case and turn defeat into victory. And these can be obtained in these days by the simple (but all too little exercised) expedient of mailing the material in question to a trustworthy clinical laboratory.

Dear practitioner, everywhere, you are the heir to a rich and splendid heritage of scientific achievement and possibilities. Do not, I beg of you, be content with anything less than a full participation in your inheritance.

When someone said to Sir Francis Burnard, "*Punch* is not so good as it was," he replied, "My dear fellow, it never was."—British Medical Journal.

DR. VICTOR C. VAUGHAN

One of the best things that the American Medical Association did at its recent meeting in Minneapolis the latter part of June was to elect to its presidency Dr. Victor C. Vaughan, for many years a teacher (now dean) in the medical department of the University of Michigan—indeed, this is one of the best things that the Association ever has done.

I speak with peculiar earnestness, because I sat under the instruction of Dr. Vaughan myself, at the Michigan University, 'way back in the 80's. At that time Prof. Vaughan also was a young man, having received his diploma from our common alma mater only a few years before—in 1878, I believe. It was Dr. Vaughan who first aroused in me an enthusiasm for practical therapeutics. I shall never forget the special lectures he gave us on the five important drugs, opium, aconite, belladonna, nux vomica, and digitalis, and their active principles. Into those few lectures he crowded a fund of practical helpfulness that has rendered me good service throughout a most strenuous professional life, merging into the special work in which I am now engaged and for which they served as essential inspiration.

Dr. Vaughan has always been at work in the field of research, but never has he ceased to be a practical man at the same time; and, somehow, whatever he does, to whatever work he may turn his energies, something comes out of it which makes for the benefit of the profession, and, through the profession, of the people.

Is it to be wondered that I have a peculiar interest in the newly elected president of the American Medical Association, and entertain for him the highest admiration? I want to congratulate him personally, and so take this opportunity of saying, "Good for you, Professor, you had it coming."

'WARE THE GREEN APPLE

In a beautiful story published in one of our magazines, Virginia Terhune Hardy depicts the terrors that agitated the mother when her son played football. Each season the game takes its toll, small in the aggregate, as compared with the benefits it brings in the way of developing manliness, yet spelling grievous loss to the families of the individuals involved. The same may be said of every athletic sport—swimming, boating, wrestling, and the rest.

Nevertheless, who can value these exercises as a preparation for the buffets and the demands that will surely fall to the lot of the future man? What would become of humanity were our boys confined by doting mothers to crocheting and croquet! Croquet? The writer bears on his ankle a relic of a croquet game of many years ago.

With characteristic feminine inconsistency, this same mother who dolls her boy, allows him a latitude in the way of eating that appals the male adult. For every life lost by man-making sports, twenty succumb to the green apple. True, its value lies along the same line—the experimentation whereby each learns for himself to differentiate between foods wholesome and foods otherwise. Painful and perilous, though, is the experimental stage. The juvenile stomach that has endured candy, cookies, pies, puddings, ice-cream, peanuts, raw artichokes, bananas, bread and jam, and the various leftovers, that are to be obtained by foraging through ice-box and pantry during the famished interval between meals, rebels at last when the sour, wholly indigestible unripe fruit is added.

Generally it is merely an attack of belly-ache, to be dissipated by a carminative, ant-acid or anodyne; sometimes an emetic is needed, to rid the outraged stomach of its unreasonable burden, and the mother is edified and confounded at the evidence of her small son's gartronomic qualifications. But the trouble may be more serious, and convulsions mark its gravity. Then, indeed, the hypodermic of apomorphine comes into action. Or, that old family standby, ipecac, meets the need—not old, uncertain and too often ineffective syrups, wines, extracts, and powders, from which the virtues long since may have departed, but in the form of the un-

changing and ever dependable emetine granules dissolved in warm water.

The old custom of coping with children's ailments by administering an emetic while awaiting the doctor's advent was a good one and ought not to become obsolete. Every sick child from time to time requires cleaning out, and the stomach needs it quite as much as the bowels. Many a time when this preliminary evacuation has been accomplished we find there is nothing left to do, save a warning for the future, which we well know will, of course, be disregarded.

Yet, after all, there is another side to the green-apple question. Why does the boy eat the fruit? Partly, we may answer, because he needs the nutritive principles it contains but which his inattentive parents have neglected to provide in his regular diet. Partly also, because the boy's digestion accomplishes its task so quickly that he is hungry before mealtime arrives—a fact every parent should remember, but few really appreciate. But the principal reason is, that the child must learn to eat, to accustom the immature digestive system to varied demands.

So it is that the urchin sits on the fence, munching the unripe fruit sneaked from the neighbor's orchard; and next day, instead of witnessing a funeral cortège issuing from his home, you see the same urchin perched on the same fence munching more of the same unripe fruit. The growing lad has accustomed his peptic viscus to a foreign comestible and, Mithridates-like, surmounted the peril of empoisonment.

Adam and Eve had many advantages but the principal one was that they escaped teething.—Mark Twain.

SEMPER PARATUS

"In days of old, when knights were bold," a great British family assumed as its motto, "Semper paratus"—"I am always ready."

This would be a good motto for the young doctor starting to practice; but he could improve it by making it read, *Semper præparatus* Always ready is well enough in its way, but it is rather a matter of course; always prepared, is but slightly different in meaning, yet it is the difference between success and failure.

Of the hundreds and hundreds of good things published in this journal, one especially comes to my mind. It was written by a woman, and when the lady doctor deigns to write, she is sure to say something that arrests attention and clings to memory. She had a case that meant something to her, and she happened, by good judgment, to have in her satchel exactly the remedy needed in the circumstances. This remedy was administered, the attack was aborted, the sick child quickly cured, and the family left in grateful appreciation of the doctor's skill.

I do not recollect now what the particular remedy was—I think it was a tonsillitis tablet—but what I remember best was the doctor's explanation. She had a habit of studying the advertisements and catalogs of remedies; and when she came upon anything she thought she might need she sent for it. "This is what keeps me poor," humorously added the doctor in her account; but I venture the assertion that that one case paid her for a year's experimenting along that line.

This brings to mind an incident in the writer's early years of practice. The nitrite group had just been introduced and he was so impressed by the accounts of their wonderful properties that he invested in a bottle of amyl nitrite. Strongly bottled, the glass stopper securely tied down with a cap of goldbeater's skin, the new acquisition rested many a day in the satchel, being handled carefully and regarded with a certain awe.

One day the writer was passing along the street, when suddenly cries of fear issued from a near-by house. A woman rushed out and, recognizing the doctor by his satchel, screamed to him, for God's sake to hurry, that a woman was dying. He rushed in and found a room full of excited, panic-stricken neighbors, who surrounded a woman prostrate in the agony of angina pectoris. Instantly the thought of the nitrite came to mind. The bottle was wrenched open, a drop of the pungent liquid applied to a handkerchief, and the latter held to the woman's nose. One inspiration sufficed; the spasm relaxed, the woman rose to her feet, looked around the room, and then, in a perfectly natural voice, said: "What are all you people doing here? There is nothing the matter with me."

Tableau! An amazed assembly, stupefied, with wide-open eyes and mouths, and a doctor scarcely less amazed, but with sense enough to hide his surprise and to look as if going about doing such miracles were a common matter with him. As if it were but yesterday, I can see that woman as she stood there in the crowd of common-looking people. She was tall and svelte, with white skin, blue eyes, and thick flaxen braids that reached down below her knees—a typic Marguerite. To the day of her death that noble woman remained one of my firmest

friends, while in the neighborhood I was regarded with something of the same awe in which that miraculous remedy was regarded by those who knew of her recovery.

That was more years ago than I like to acknowledge. Long since then, that remedy has been popularized under the name of glonoin, and the appellation, "the little giant life-saver," bestowed upon it testifies to the appreciation in which it is being held by thousands of physicians.

Am I not right in feeling that one such experience is worth more than all one might spend in such investments for future possibilities? The incident by no means is unique; many a success has been won through the habit of constantly searching for new and better remedies.

If a man believes he has something good for our use and believes in it enough to make him spend good money to tell us about it, he deserves a hearing. If the reasons for his belief seem plausible, his remedy is entitled to a trial. If the remedy is a better one than its predecessors, our patients are entitled to its benefit, and we can hardly afford to permit the other doctor introduce it to them.

This does not justify one in running after every new thing simply because it is a novelty, deserting old and well-tried remedies. One must use judgment. Sometimes a critical perusal of the introducer's argument shows merely that he has something he wants to sell. At other times we see he evidently is honest, but mistaken, through ignorance of the matters on which we are better informed than he.

Of late, many remedies come to us backed by the power of money and headed by the authority of a name. We are asked to buy the remedy, because the great trust company offers it and Prof. Big-Bug says it's good. With all due respect to the professor, we have some little knowledge ourselves, and we ask for something that appeals to our reason before we take up the proffered novelty.

Be kind to little children. Women and children furnish the greater part of our patrons. Men do not count for much in the practice of medicine.

—Dr. Frank P. Davis.

THE CHARACTER OF INFANT STOOLS

A great deal can be learned about the nature of an intestinal disorder from a macroscopic examination of the stools. It is the character of the stools, rather than the quantity, which determines health or disease; and it is not, as a rule, considered that an infant has diarrhea, even though the movements be quite frequent in the twenty-four hours, as long as the stools are normal in character. Normally the stools of an infant are yellow in color, smooth, of about the consistency of butter, containing no curds or lumpy masses, and exhibiting no mucus to the naked eye. The reaction is very slightly acid, or neutral, or even slightly alkaline. The rule is that when the stools are slightly acid the color leans toward brown; when mildly alkaline, toward green.

Pathologic variations from these normal conditions, i. e., in disorders of the intestines (no reference here being made to the direct influence of the content of the food) and their significance, are as follows:

White or grayish in color, solid or lumpy in consistency, indicates a deficiency of bile, an excess of fat, and a slightly acid reaction. This is the character of the stools in intestinal indigestion.

Black, tarry, sticky stools point to a hemorrhagic condition, usually of the upper digestive tract, and are frequently seen in severe inflammations of the stomach (acute gastritis) or of the small bowel (severe gastroenteritis).

Light brown, or green stools, of an almost liquid consistency, are practically always the result of microbic action, and indicate a true intestinal infection. According to Hayem, Escherich, Vignal, Gautier, and other investigators, diarrhea seems to be excited especially by the organic acids and the alkaloids formed in microbic action. The simple common forms of diarrhea are probably provoked by the irritant action of these acids on the mucosa of the intestine, and the resulting stools are usually alkaline, on account of the attempt of the body to neutralize them. The graver forms, notable for the suddenness, violence and seriousness of their attack, are due to the poisonous effect of the animal alkaloids, and the stools in this case are acid. So, in the early stages of intestinal infections, the stools are green; as the microbic alkaloids are produced they rapidly become light dirty brown, with a very foul odor; and finally become yellow as normality is restored.

Colorless, completely liquid stools (the socalled rice-water stools) represent the extreme stage of an infective diarrhea, when there are no longer any pigment substances available; nothing but the alkaloids of the microbic action and the fluids abstracted from the body tissues.

Finally, let me tell you of a sign observed by my good friend here in Ravenswood, Dr. Young. It was new to me and it may be

new to you. After an infant has suffered from one of the acute summer diarrheas it is often a problem when to resume the regular diet. Begin too soon and the trouble will recur—and yet we are anxious to begin building up the under-nourished youngster as soon as possible. After years of observation of babies—and Young has treated thousands of them—the doctor is sure he has discovered a sign that is of ptactical value. It is this:

Watch the stool of the convalescing babe carefully. Just as soon as you observe small, bright-yellow, glistening particles which adhere to the sides of the vessel—they may be hardly larger than a pin point—the secretions have started up and it is safe to begin feeding the patient, carefully of course. But don't give milk or other solid food of any kind until you see these yellow particles. Dr. Young has been watching this sign for many years and he says they are as diagnostic as Koplik's spots in measles, and of more practical value. He wants the readers of CLINICAL MEDICINE to observe and report.

An observation like this, made practical by much application, may save many lives—and it certainly adds to the doctor's reputation. I am sure that you, Doctor, are picking up similar points in your own work. But are you reporting them?

BABIES' COLIC

Must babies have colic? It might be argued that the colon, being a mere relic of a preevolutionary stage, useless and menacing the life of its human possessor, must learn to fill the office it has to perform in our infantile economy, and that this requires time, punctuated by failures and motives. True, possibly—who may prove to the contrary?

It is so much easier to affirm or to deny than to prove or refute. But, after some years' observation of what mothers give their babies to eat and what the nursing woman herself eats and transmits to the suckling, one readily admits that no further explanation of babies' colic seems necessary. In truth, the dare-devil bravery which women display in presenting aliments to their infants' inexperienced digestive system leads one to favor the proposition that the armies of the world should be recruited from the fairer sex. Swiss cheese, raw fruit, sausage, beer, these, and more stuff, the writer personally has known to be proffered by their maternal guides to luckless infants not yet ready to walk upright. However, we are the more interested in the means of obviating the consequences of these errors of judgment which we know the ladies will make, despite our warnings—be it merely to display their independence. (And how dearly they do relish it when they have given the forbidden fruit and no harm follows that is apparent!)

Two therapeutic principles are involved in the treatment, the first consideration being the relief of the intestinal spasm.

We have to do, here, with a spasmodic contraction of the circular fibers of the viscus, and this is the cause of the pain. Opiates relieve spasm, and paregoric is as common a domestic remedy as the hot-water-bag. The latter very often answers the purpose, but it not wholly safe, as serious burns may result from its incautious application.

Atropine is superior to morphine as an antispasmodic, but these two alkaloids are very big tools for using upon little babies. We have, in the carminatives, remedies quite effective and comparatively harmless—although one may ask what is the effect of the volatile oils on the delicate structure of an infant's kidneys. However, a few drops of aromatic ammonia give quick relief and neutralize acidity at the same time. Better than the working woman's panacea—whisky.

The second indication is derived from the fixed axiom that the fact of irritation presupposes the presence of an irritant. Hence, the evacuants. Among the innumerable evidences of design upon which theologians formerly based an argument for the evidence of a divinity, we may place the existence of rhubarb and ipecac; for, surely, the good Lord, whose creative scheme included babies, must have planted these two drugs in foreknowledge of their needs!

One of the object-lessons for a young mother is, to witness the results of an emetic dose of ipecac. Less obvious but vastly more important is the gentle effect of very small doses of it in restoring normal digestive secretions. An enlightener is rhubarb also, as it brings to light the slimy, ill-digested, fermenting, decomposing cause of baby's pangs. The mother soon learns to note the beginnings of indigestion, and the bottle of neutral cordial is ever at hand. Modern pharmaceutical science has evolved this admirable compound of rhubarb, ipecac, hydrastis, alkali, aromatics, and the safe and effective antiseptic, sodium sulphocarbolate—and even the alkaloidist has not improved upon it.

And this brings us to one of our numerous hobbies—why doesn't the doctor replace the heterogenious collection of household-remedies

to be found in every house by his own sedative? For each of these dangerous unknown mixtures he should supply a safe and effective sedative, instructing the head of the house how she should use them. For, to expect the family to summon the doctor for every trifle is preposterous. People will use home-remedies for colds, coughs, diarrheas, colics, constipation, headaches, little wounds, cramps, and other slight ailments. Better give them your own sedatives and instruct them when and how to apply them.

At the same time take the opportunity to forbid absolutely all headache and insomnia tablets, opiates, toxic antiseptics, and other poisons that might be taken by mistake. This duty accomplished, and the hold of the doctor upon his families is strengthened, and the day of doom for the nostrum is near.

Men and brothers, let us rise, gird up our loins and swat the flies. And sisters, leave your cozy bowers where you have wasted golden hours; with ardor in your souls and eyes, roll up your sleeves and swat the flies.—Walt Mason. Also "clean out, clean up and keep clean"—the streets, alleys, and your own premises.

VACATION ACCIDENTS

Most of us are looking forward more or less hopefully to our summer vacation. Just as soon as Mrs. Blank has had her baby, and when the collections shall permit, we are going to hie us to the woods and forget that there exist such things as sickness and death. Our eardrums vibrate sorely to the complaints of women, our brains ache with the effort to fit thereto plausible explanations, and think of remedies likely to help. Our sympathies have been drawn upon until the fount seems exhausted. Oh, for a lodge in some vast wilderness, where no galoot can call us Doc, where no female may pour into our unwilling ear her tale of wo, where no squalling brat can fight us in our endeavor to relieve him of the effects of greed, and bring to light the mystery of what became of the jam.

But we know better. There may be rest for us "on the other side of Jordan," but there is none on the side of Wisconsin's lakes. We are no sooner planted in the wilds, with no sign of humanity within leagues, than they begin to drop in. Consumptives in the last stages, victims of inoperable cancers, diabetics, nephritics, people with leaky hearts or swollen livers, long past the stage of possible cure, mysteriously drift into our camp, having heard that a city doctor is there. These we dispose of easily, but there are other demands upon our professional services. The accidents that occur must be attended to, and the man who has had experience in vacations will be prepared for such.

A pocket instrument case and simple dressings go as a matter of course. A hypodermic syringe of the sort that can not break; six vials of tablets; a 12- or 24-vial granule-case; atropine for hemorrhages, strychnine for snakebites, morphine, quinine, emetine, calomel, elaterin, glonoin, aconitine, a goodly supply of laxative saline, iodized calcium to break up colds, besides a few others—sure, that, were we to carry our 100-vial-case, we should find that the one thing most needed had been omitted. Also we shall find that of the most necessary drugs our supply is too small.

The accident perhaps most likely to be encountered is a bout with rhus tox. This pernicious plant abounds in many places and seems difficult of eradication. Its effects are distressing and may utterly destroy the pleasure and benefits of the summer outing. Take along a pair of rubber gloves, and pull up every plant, with its roots, and burn them. Don't stop to rub the sunburnt places while at this task, or you'll regret.

Some years ago when this journal published a symposium on this matter, several correspondents favored the application of spirit of nitrous ether as the best remedy. Lately it has been wisely urged that we begin by vigorously scrubbing the affected skin with a brush and laundry soap, to remove the toxicodendrol, the volatile oil to which the poisoning is atrributed. The strongly alkaline soaps are best. Baking-soda gives relief, possibly by saponizing the oil. Fats are believed to increase the suffering, as they dissolve the harmful agent and render it active; but so does alcohol, yet, that it thought to give relief. Lead is generally advised; a solution of lead acetate often serves well, and possibly white lead would be a good application. I do not recollect of hearing the clay-glycerin poultices suggested. Soda, however, is nearly always to be had, and in camp this is important.

Snake venom is a complex substance, but in most American serpents a prominent component is the vasorelaxant principle, which paralyzes the walls of the great abdominal veins, and thus allows the blood to collect there until the patient faints from cerebral anemia. This symptom we can successfully cope with by administering strychnine. As the dose of the venom is indeterminate, and it and the strychnine mutually antidote each other, we have to keep piling in the latter

until the characteristic muscular rigidity is induced, and then sustain this effect by additional doses whenever the relaxation becomes again manifest. The doses of strychnine thus taken may be largely in excess of those that would kill a man not under the influence of the counterpoison.

What else may happen at a summer camp? Anything.

In my collection of scarfpins is one of Spanish make, a black enamel head of Hannibal, that represents a life saved and a friendship made—a man found dying of tuberculosis and acute pleurisy, at a camp twenty-five miles from other aid. The indomitable fight that man has put up for his life has won universal admiration—and it has been successful!

Somebody indulged in quite an outburst of sarcasm once, because we mentioned a treatment for "drowning." Naturally, if a person is drowned there can be no treatment. But how do you know he is really drowned "dead"? Instances are not few where men supposed to be drowned have been resuscitated, even after the lapse of a period usually considered beyond hope.

If I remember rightly, the remedy suggested was the combination of atropine, strychnine, and glonoin—that meets so many emergencies so well. If there remains a spark of life, if the circulation can still carry the drugs to the cerebrum, if its centers can yet be induced to react, there is a chance for success; the usual methods being employed as well—artificial respiration, etc. The man who declares there is no hope may be able to say—"I told you so;" but he never saves anybody. Even with failure there remains a sense of satisfaction that one has at least tried his best.

There are great possibilities for good in that triad: glonoin, to quickly suffuse the brain with blood and arouse the vital reaction; atropine, to continue and increase the effect attained by actively dilating the capillaries; strychnine, to enhance the activity of both, and the cerebral response, to strengthen the heart and lungs, and to arouse the vital functions. I look upon it as the post powerful and widely applicable emergency-remedy ever devised.

ANTINARCOTIC LEGISLATION BY CONGRESS

For several months past we have had a great deal to say about pending antinarcotic legislation, good and bad. We have warned our readers against the danger of certain bills, introduced in Congress and in different state legislatures, which, while they have purported to be efforts to end a great evil, were really so drafted as to be class legislation of a dangerous character.

We have been and are favorable to every straightforward effort to put an end to the improper use of morphine, cocaine and similar dangerous habit-forming drugs. We are therefore happy to announce that a bill of the right kind has at last passed the lower house of Congress, one which seems sane, honest, and promises to be effective. We refer to Mr. Harrison's measure, H. R. 6282. This is (except for a few minor changes) the bill drafted by the National Drug Trade Conference, at the meetings of which, in January and April, representatives of CLINICAL MEDICINE were present. A digest of this bill will be found on page 430 of the May number of CLINICAL MEDICINE, to which we refer you. It is now pending in the United States Senate, where it has been read twice and referred to the Committee on Finance. There is good reason to believe that it will be passed quickly, and that it will receive the signature of President Wilson, who is known to be very anxious that legislation of this character shall become effective as soon as possible.

We urge every reader of CLINICAL MEDICINE to support this bill and to use his influence to secure its passage unamended. As it now reads there is no discrimination against the physician, it being specifically provided that—

> Nothing contained in this section (Section 2) shall apply (a) to the distribution of any of the aforesaid drugs to a patient by a physician, dentist or veterinary surgeon registered under this Act in the course of his professional practice only, *provided, however*, that such physician, dentist, or veterinary surgeon shall personally attend upon such patient.

This act will place burdens upon the medical profession, but they are equitably distributed, are not excessively onerous, and seem to be necessary to render the legislation effective in the suppression of drug-habit abuses. Every physician, dentist and veterinarian will be required to register with the collector of internal revenue of his district and to pay a special tax of one dollar a year. Unless he is so registered it will be impossible for him to dispense, sell, distribute or give away any of these drugs or their combinations (except in minute quantities) without exposing himself to fine and imprisonment. Since practically every physician, no matter whether he prescribes or

dispenses, is compelled to have at hand ready for emergencies a supply of morphine, codeine, cocaine, and the like, no one will be exempt.

This bill requires proper records of the physician's purchases, but these are provided for by the enforced preservation of duplicates of the official order-forms, by the use of which supplies can alone be obtained. The doctor will not be compelled to keep a record of "sales," that is, of drugs dispensed. The excessive use of narcotic drugs in his practice, being readily detected by the federal inspectors, will, however, be sufficient cause to subject him to rigid scrutiny and prosecution if he goes astray. As the bill now stands it will be possible to trace to the ultimate consumer all the opium and coca and their alkaloids and derivatives imported into the country. As soon as the law becomes effective it should cause an enormous reduction in the consumption of narcotics, put an immediate end to the peddling of cocaine, heroin and morphine, be effective in closing up the opium dens, and make the sale of narcotics to drug-fiends a mighty perilous business.

There are several men who deserve especial commendation in connection with the movement resulting in the framing of this national antinarcotic bill. Prof. James H. Beal, secretary of the American Pharmaceutical Association, was largely instrumental in getting together representatives of the different branches of the drug trade in the National Drug Trade Conference, and Mr. John C. Wallace, of Newcastle, Pa., presided at its meetings and represented that body in private conferences with Mr. Harrison in a manner which was eminently fair to all the interests concerned. These two gentlemen represented the American Pharmaceutical Association. Mr. Charles M. Woodruff, of the National Association of Manufacturers of Medicinal Products, the secretary of the Conference, also did most excellent constructive work. The interests of the physician, especially of the dispensing physician, were carefully looked after by the representatives of the American Association of Pharmaceutical Chemists. As a matter of fact the members of the Conference generally were plainly actuated by high ideals, and the recognition by Congress, of their work in building this bill which passed without opposition, speaks well for their work.

Again, we say, *support this bill;* but insist that it shall not be tinkered with in the interest of any individual or trade. Also, watch carefully for any state legislation which may possibly be inimical to the interests of the physician.

CLINICAL EVIDENCE

The difficulty with clinical evidence lies in its uncertainty. One can never be altogether sure that the phenomena presented to his consideration are *post* or *propter hoc*. Sequences are not necessarily consequences.

Take for example echinacea. Originally introduced by Mayer as a remedy for snake poisoning, this root acquired some repute because many persons bitten by poisonous serpents and treated with its extract did not die then. But not one of these persons was aware that of those bitten by rattlers only ten percent die in consequence; of those similarly wounded by copperheads, but one percent succumb; and the Smithsonian Institute could not find a single authenticated instance of death resulting from the bite of any species of moccasin.

Not knowing these facts, one might treat 100 persons bitten by rattlesnake and, having but 10 percent of deaths out of that number, attribute to the particular treatment a high value, such as it in no degree deserved.

So as to the treatment of wounds by the local application of fluid preparations of echinacea. Some time ago I treated a series of wounds, abrasions, bites, and so on, where the skin was broken and inflammation — *ergo* infection—had supervened, by applying tincture of echinacea. In every case there was next morning such evident improvement that we all felt inclined to place a very high valuation on the remedy. But—was it the plant-principle or the alcohol?

Frankly, I do not know. Do you?

Here we have the objection to clinical evidence in a nutshell. It is difficult at all times to separate the accidental and the psychologic, and fairly estimate the value of the remainder. Still, it can be done.

How?

Only by the application of the collective investigation. This powerful weapon has been urged repeatedly, but it seems inpossible to induce the medical profession to put it to use.

More than 30,000 practicians probably will read this. If every one of them who has employed echinacea were to send us a report of his results, we could go far toward securing a true composite picture. One may err, a dozen less likely, but for thirty thousand to do so is scarcely possibly.

Leading Articles

How Do Purgatives Act?

By GEORGE E. PETTEY, M. D., Memphis, Tennessee

EDITORIAL NOTE.—In June we published the first installment of Dr. Pettey's paper upon the purgatives, which we complete in this issue. Since this article has been put into type the Doctor's book, "Narcotic Drug Diseases and Allied Ailments," of which this matter forms a part, has come from the press of F. A. Davis & Co., Philadelphia. This work is filled with material of the utmost value to the general practitioner. You should read it.

II.

IN HEALTH, when the nerve-centers are acting normally, motor impulses are *generated and rhythmically transmitted* to the abdominal viscera. This is manifested in the intestinal tube by waves of peristalsis, setting in at the pylorus and extending throughout the entire length of the small intestine. The waves amount to a wormlike movement by which every part of the structure of the tube is changed in its relation to other parts.

The uniformity and strength of the motor waves depend upon the state of activity of the nerve-centers. If the centers become lethargic, the waves are less distinct; if the centers are profoundly blunted, the waves cease altogether. In disease, they frequently are in this inactive state; in narcotic addiction, they are habitually obtunded.

Direct Physiological Stimulation

So far we have considered three of the methods by which this inactivity may be overcome, but the fourth, which is by far the most valuable and efficient, is now to be considered.

Inasmuch as the functional activity of the intestinal tube depends upon the nerve-centers, if these centers are inactive, the motor activity of the intestinal tube, and the secretory activity of the glands emptying their products into it, are correspondingly impaired or suspended.

In attempting to remedy such a disordered condition, our first effort should be, to restore as far as possible the centers to a state of responsiveness. If they have become exhausted from overexcitation, then sedatives, motor depressants, should be given; if the suspension of their activity is due to the sedative effect of some morbific poison, then remedies that will directly stimulate the motor centers should be given.

It should constantly be borne in mind that, to secure evacuation from the bowel, it is equally as necessary to stimulate activity of the motor function of the tube as of the secretory function of the glands.

Bile the Physiologic Peristaltic Stimulant

The bile is probably the normal stimulant of the intestinal movements, and most substances employed as cathartics doubtless act in the same way. These substances irritate the terminal filaments of the sensory nerves distributed to the intestinal mucosa. This irritation is transmitted to the centers, and there motor impulses are generated and reflected to the point from which the irritation comes; and in this way that part of the intestinal tube is set in motion.

If complete paralysis exists, of course no amount of irritation will excite motion. Where paralysis is only partial, or where the centers are benumbed by disease, or have their sensibilities reduced by powerful sedatives, a higher degree of irritation is necessary to induce peristalsis.

Agents which excite peristalsis by irritation of terminal nerve-filaments frequently are incapable of exciting such action unless these centers are brought into a state of responsiveness by direct stimulation.

The intestinal fluid may be an irritant to all parts of the mucous membrane which it

reaches; but because the tube lies in numerous folds the passage of this fluid downward, when motor activity is impaired, is much delayed. Until it has been distributed downward to a considerable extent, enough of the surface is not irritated to cause peristalsis throughout the entire length of the tube.

In the author's experience, there are few conditions that make it best to do indirectly what can be accomplished directly. It seems unreasonable to depend upon so inefficient and uncontrollable an agency as reflex irritation to induce peristalsis when it can be excited, to any degree desired and at just the time it is needed, by stimulation of the motor centers with strychnine.

Physiologists teach us that waves of peristalsis set in at the pylorus and extend down the entire length of the tube. This doubtless is true in health, since these waves originate because of the normal activity of the motor centers and are transmitted throughout the entire length of the tube; however, when the biochemism of the motor cells is interfered with by toxins, these normal waves cease or are much less pronounced.

In this condition, if it is sought to excite peristalsis by introducing irritating substances into the intestinal canal, that part of the canal to which the irritant is applied will first be thrown into action. The contraction of the tube thus induced urges the irritant downward with greater or less speed.

But as these substances make their impressions upon each section of the tube only as they reach it, and as the motor impulses called out by this irritant are reflected only to that part of the tube from which the irritation came, the tube is not thrown into motion as a whole or at once, but section by section, and only as each section receives motor impulses transmitted to it in response to impressions made by the irritant upon the nerves of that particular section.

Strychnine as a Motor Stimulant

Strychnine is an excitomotor stimulant and has an elective action for the involuntary, or unstriped, muscular fiber; and, as the muscular coat of the intestine is composed of this class of fibers, the entire length of the intestinal tube can be thrown into motion by direct stimulation of the motor centers by this drug without materially effecting the voluntary muscles.

Peristalsis induced in this way corresponds exactly with that of health; that is, it occurs because of the artificially induced activity of all the cells in the motor centers controlling this function, and because motor impulses generated in response to this artificial stimulus are transmitted in a uniform degree to all the structures that would receive them if the centers were acting normally.

The quantity of strychnine required and the frequency of administration depend mainly upon the degree of lethargy or insensibility of the nerve-centers; but when strychnine is administered in sufficient quantities and at proper intervals, active peristalsis can be excited and kept up as long as desired, provided the nerve-centers are in condition to respond to any kind of stimulation.

If strychnine be administered in conjunction with mercurial or other secretory stimulant, each does its part of the necessary work in bringing about the conditions essential for normal evacuation of the bowel.

By strychnine, the intestinal canal throughout its entire length is thrown into normal or supernormal motion by stimulation of the motor centers. By increasing the irritability of the motor centers, this agent brings those centers into such a state of sensitiveness that they readily respond to any peripheral irritation reflected to them. In this way reflex stimulation is made to augment direct stimulation more effectively.

As soon as the secretion-producing agent begins to pour its product into the intestinal canal, this secretion and any other intestinal contents are gently, gradually, but certainly carried downward, thus bringing the chemical irritant into contact with more extended surface of the intestinal mucosa.

There occurs no overdistention of the bowel at any point, no reversed peristalsis, vomiting, colic or other distress. In other words, the condition essential to normal evacuation of the bowel have in reality been artificially induced, and no more distress or other discomfort accompanies the act than if no artificial means had been used in its induction.

This action is primary, direct, and sustained. Increase of peristalsis is one of the early effects of strychnine. It may be noticed within thirty minutes from the time of giving a full hypodermic dose; this evidently being due to its direct stimulation of the motor centers. This effect of strychnine probably persists longer than any other; or possibly it would be more correct to say that intestinal movement excited by the strychnine continues after the other effect of the strychnine has completely subsided. This is due to the fact that the active peristalsis excited by the strychnine results in a more perfect mixing of the intestinal con-

tents. The chemical changes incident to this augment the effect of the strychnine by increased reflex stimulation, and this persists after the stimulating effect of the strychnine has ceased.

Theory of Action of the Mydriatics as Synergists to Strychnine

In this connection, the author wishes to call attention to the action of the remedies of the belladonna-group, which in this particular are synergistic to strychnine.

Strychnine increases the motor activity of the intestinal canal by its action as an excitomotor stimulant. On the other hand, atropine, scopolamine, hyoscyamine, daturine, in fact all of the principles of the belladonna-group, excite both secretion and intestinal motion; but the manner in which they do this seems not to be well understood, at least it is not clearly taught in therapeutic works.

The author is never satisfied to use any drug empirically; if he can not arrive at at least a plausible theory as to its mode of action, he can not use the remedy to advantage.

In considering the action of the belladonna-group of remedies, the following view of their action seems more satisfactory than any other, and the writer believes it is in accord with established physiologic law.

It is an established principle of reason that there can be no cause without effect. When an effect is demonstrated, its antecedent cause is assumed. There is no action without a reaction; therefore, no reaction without a preceding action.

In applying these principles of reasoning to the belladonna-group of remedies, we find that in their primary action they inhibit vasoconstriction, thus becoming vasodilators. This inhibitory action extends to the circular muscles of the intestines as well as to the circular fibers of the arterioles and capillaries, and doubtless also to the circular fibers of the ducts of the lymphatic system.

This inhibitory action on the circular fibers of the intestine overcomes irregular spasmodic action in that organ and thus aids in preventing griping from the effects of the secretory stimulants. This occurs during the time the primary effects of the remedy are active.

The same inhibitory action extending to the circular fibers of the arterioles and capillaries allows them to dilate, thus rendering the peripheral circulation more active. The peripheral surface of the body is the sensitive, the perceptive area. Increased circulation in any part increases its sensitiveness. The friction of the blood or other excitant effects of the increased circulation in the surface of the body stimulate the sensory nerves leading from that surface.

This stimulation is taken heed of by the sensory terminal filaments, and this expression of activity is transmitted to the motor centers, and, being received by these centers, is responded to in sensory, motor, and secretory impulses. This impression, slight as it may be from any given part, coming as it does from the entire peripheral area, amounts in the aggregate to a positive stimulation of the nerve-centers.

In other words, the slight impressions arising from such an extensive area, converging as they do upon the cerebrospinal centers, make a distinct, potent impression upon these centers; and this is responded to by the production, and the transmission to all the structures governed by such centers of sensory, secretory or motor, of impulses, according to the nature of the center receiving such peripheral impression.

Thus do the entire group of belladonna remedies, notwithstanding they are motor inhibitory in their primary action, become, secondarily, excitors both of secretion and of intestinal movement.

This makes them invaluable adjuncts to, if not essential ingredients of, all purgative compounds. After having, by their primary effects, controlled spasms and prevented griping from the effects of the secretory stimulant, they, at a later and opportune time, supplement the effects of such agents by the augmentation both of secretion and intestinal movement.

This action is made more effective if strychnine has been given in combination with the other ingredients of the purgative course. Excitation of the nerve-centers by strychnine brings them into a hyper-sensitive state and thus makes them more responsive to the reflex stimulation excited by the secondary action of the remedies of the belladonna group.

Construction of a Physiologically Balanced Purgative

A physiologically balanced purgative compound is one in which each ingredient of the compound augments and supplements the action of the other, and all together, working in complete harmony, excite every function concerned in the evacuation of waste by the bowel proportionately.

The conjoint effects of such a combination insures the evacuation of the bowel with the same ease and freedom from distress as if action were voluntary, and not artificially induced.

Again, this proportionate, simultaneous stimulation of all the functions concerned in the bowel movement effects the discharge of the waste without undue depletion. Whereas, if chemical irritants or secretory stimulants alone are depended upon and these are pushed to such a degree as to carry off the accumulated waste, when they do begin to act, act excessively and unnecessarily deplete the patient.

But, it is important, as a general rule, that undue depletion from the action of purgatives be avoided. It is especially so in the treatment of anemic patients.

A physiologically balanced purgative compound, may be depended upon to act effectively upon patients of any class, and should be employed whenever a purgative is needed. However, purgative compounds which do not contain strychnine and atropine or other belladonna principles in sufficient quantities to stimulate effectively active peristalsis not only are disappointing in their action, but often cause great distress.

Strychnine and atropine given together act synergistically, and a more satisfactory degree of peristalsis can be excited by the two remedies combined than by either alone. For this purpose they are ideal agents.

The following schematic diagram is suggested as showing the principles upon which a physiologically balanced purgative compound can be made. A combination of a suitable quantity of a remedy of each of the four classes here named stimulates every function concerned in normal evacuation of the bowel and brings about that result with the least disturbance to the system and with the least possible tax upon its resources.

SCHEME FOR AN IDEAL PHYSIOLOGIC EVACUANT

Secretory stimulant may be any one of these alone or two or more combined	calomel podophyllin cascara rhubarb senna leptandrin aloin bryonia jalap or other such remedy
Motor excitant	castor oil? saline laxatives?
	strychnine
Antispasmodic	ipecac or emetine. (Also secretory stimulant.)
Vasodilator	atropine hyoscine hyoscyamine scopolamine daturine (also antispasmodic and, secondarily, secretory stimulant.)

Purgatives Must be Taken on an Empty Stomach

A purgative should never be given on a full stomach. If the demand for its effect is so urgent that there is not time to wait until the stomach empties itself, then an emetic should be given. Beginning with an empty stomach, removes one of the causes of nausea, vomiting, colic or other unpleasant concomitants, and does much to overcome the objections to the use of purgatives.

The purgative remedy administered acts as such because its chemical or physical properties are of a nature to render it unfit for use as an article of nourishment. These chemical or physical properties render it unacceptable or repulsive to the system—it is an irritant. Because of those irritating or unwholesome properties, the "sentinels on guard" set up an active effort to eliminate this foreign substance or its products.

The commixture of such an agent with the stomach contents renders the entire mass unacceptable for assimilation; therefore it must be thrown off, either by vomiting or be passed through the intestinal canal as waste.

Such a bulk of matter in the stomach interferes materially with the prompt and complete absorption of the remedies administered, thus delaying or rendering uncertain their action. The material is either voided from the stomach *en masse* or passed precipitately into the small intestine, where it greatly encumbers that organ and causes unnecessary suffering.

The passage, through the intestines, of incompletely digested matter, with the numerous chemical changes incident to its admixture with the other intestinal contents, together with the irritation caused by the incompletely digested matter itself, is a principal factor in the causation of colic, griping, and other distress, as well as of the reflex nausea and vomiting which so often precede or accompany the action of purgatives. This distress is avoidable, and should be avoided.

Few physicians give even a moment's thought as to the contents of a patient's stomach at the time the administration of a purgative is begun. The patient may just have partaken of a hearty meal; or, if not that, if the purgative is given in divided doses through a period of several hours, he is almost certain to "fill up" while he is taking the successive doses.

Food taken at such a time is not completely digested, and the disturbances of the gastro-intestinal canal produced by the purgative

cause it either to be vomited, or to pass downward from the stomach before having been fully prepared for assimilation; and in either case unnecessary distress occurs. The exercise of a little precaution, a little forethought on the part of the physician will prevent these unpleasant effects; hence, these facts certainly should always be borne in mind.

The administration of a purgative should not be begun when there is food in the stomach. No food should be ingested while the purgative is being administered, and, furthermore, the fast should be continued until the purgative action has entirely ceased. Also, the first meal after the purgative should be a very light one. After the action of a purgative (even after all discharges have ceased) the digestive tract is more or less enervated and disturbed; therefore it is not in condition to undertake the digestion of a full meal. If a full meal be taken at such a time, it will greatly lessen the good effects that otherwise would have come from the action of the purgative.

In the opinion of the writer, it is a serious error to administer an active secretory stimulant without at the same time making efficient provision for stimulation of the motor function of the intestinal canal. Except in a few rare conditions, motor activity always is as greatly impaired as the secretory function. Since each of these is essential to satisfactory bowel movements, the efficient stimulation of each should be provided for in every purgative compound.

Mode of Action of Purgatives

It is the generally accepted view that all purgatives act in one of three ways; namely, by osmosis, by reflex stimulation or by direct stimulation of the motor and secretory centers.

The osmosis-theory of the action of the saline cathartics has been accepted for many years, but recently doubt has been thrown upon the correctness of that view of their action. Thus, also, the writer's personal clinical experience some years ago led him to the conclusion that the saline cathartics do not traverse the entire intestinal tube.

According to the osmosis-theory, this concentrated saline solution remains in the intestinal tube, and, because of its affinity for water and the laws of osmosis, fluids are attracted from the surrounding tissues; and thus the flooding liquid stools induced by this class of cathartics are induced. If this view of their action is correct, the salines do not pass into the circulation at all, but remain in the intestinal tube and by their physical action attract fluids from the body.

This view of their action was accepted by the writer up to the time he began to treat narcotic habitués; but, in these cases their action was so disappointing that he was forced to reach the conclusion that the intestinal tube could not be fully emptied by the saline cathartics. This conclusion was reached from the following state of facts.

Doubt Thrown Upon the Osmosis-Theory

A patient when admitted to the institution was constipated. He was given a free colonic flushing, which removed everything from the colon that could be reached by an enema, the same being administered in the knee-chest position. Then epsom salt was administered in full doses, and the dose repeated until from four to six free evacuations had occurred.

It would appear that the flushing action of this saline, preceded by the colonic flushing, would have fully emptied the intestinal canal. It seems certain that it would have done so had the epsom salt and the fluid attracted to the intestine passed through the entire length of the intestinal tube. However, as a result of the administration, on the same day, of a physiologically balanced purgative compound containing sufficient strychnine to excite free peristalsis, the patient passed a considerable quantity of semisolid matter.

Now, the writer does not believe that this semisolid matter could have remained in any portion of the intestinal tube through which these free watery discharges passed. Therefore, he was compelled to conclude, from repeated experiences such as this, that the saline cathartic was absorbed from the stomach and upper part of the small intestine and subsequently excreted by the colon, most likely by the transverse and descending section; *thus passing around rather than through the small intestine.*

The writer cannot say that this theory as to the action of the saline cathartics is the correct one; still, recently some confirmatory evidence has been secured. Dr. Arthur F. Hertz, assistant physician at Guy's Hospital ("Guy's Hos. Rep.," Vol. 63), has shown, by administering bismuth preparations at various periods of digestion and taking x-ray pictures of the abdomen at different periods of digestion, that salines really are absorbed from the stomach and upper bowel and probably excreted into the lower intestine.

Herz, in cooperation with F. Cook and E. G. Schlesinger, has shown that when food is taken into the stomach it reached the cecum in about four hours. A saline aperient, on the other hand, may cause an action of the bowels often within two hours, and in some instances even in half an hour.

Insoluble bismuth being administered with a meal will show, by radiographs, the exact length of time in which food passes down through the different portions of the intestine. When a seidlitz powder or its equivalent is taken at the time of the bismuth or with the bismuth and food and then radiographs are taken, it is shown that the movement of the bowel comes long before the bismuth and food reaches the colon. The excess of water excreted with such movements, therefore, cannot come from the small intestine, since otherwise it would wash the meal and the bismuth down with it, but, as a matter of fact, must be excreted into the lower bowel. Saline purgatives also seem to cause no increased acceleration of passage of the food from the stomach to the cecum.

These investigations seem to show clinically that, when it is desired to empty the colon and not to act upon the small intestine, laxative salines are indicated; but, when it is desired to cause stimulation of excretion or of increased peristalsis or for drainage of the upper bowel, that cathartics other than the salines are indicated.

The conclusion from Dr. Hertz's experiments is inevitable, it seems, that the saline purgative given with the meal was absorbed from the stomach, thus leaving the meal to pursue its own course through the bowel undisturbed, its passage not being hastened by the salines. May it not be that the salt, getting into the blood, renders the latter excessively alkaline? This excessive alkalinity not being acceptable to the nerve-centers, an active effort for its elimination would be excited, and, inasmuch as the colon happens to be the organ through which the salt is thrown off, the free watery bowel movements are the necessary result.

Movements of the Ascending Colon

The recent work of Cannon, and Starling, and Bliss, by which they have demonstrated the function and motility of the ascending colon, leads the writer to offer the suggestion that the saline most likely is excreted by the transverse and the descending colon, and not by the ascending colon.

It has been shown by the investigators named that the functional activity of the ascending colon very greatly resembles that of the stomach. It is from this organ that the residue of nutritive matter not absorbed higher up is taken up by its absorbing villi.

The reversed phase of the peristaltic waves, which begin at the spleenic flexure of the colon and travel backward to the cecum, serves to macerate and mix the contents of this part of the intestine, and to force back the more movable, liquid parts toward the ileocecal valve, thus preventing the too rapid passage of the contents of this part of the bowel to the transverse and descending colon, and giving more time for the absorption of nutrient material from it.

Cannon has shown that these reverse waves of contraction are not true peristaltic waves; that is, they are not preceded by a zone of inhibition, but are mere contractions of the circular muscles, and that these travel from the spleenic flexure of the colon to the cecum in waves at the rate of about twenty per minute.

These contractions of the bowel running in a reverse direction to the normal peristalsis-wave urge backward toward the ileocecal valve the more liquid contents of the bowel and bring these substances into intimate contact with the intestinal villi, which are absorbing structures. It is here that the fluid portions of the residue of the products of digestion are absorbed and the more solid portions are formed into a cone in the center of this part of the intestine. This cone lengthens, little by little, by the concentric action of the circular muscular fibers upon it; and as this cone lengthens it projects into the transverse colon, whence it is swept off by a normal peristaltic wave running in the usual direction and is transferred to the descending colon and finally the rectum.

Now, since it is true, as has been shown, that the ascending colon is an organ from which the nutritious material is taken up, it is not likely that nature would contaminate such a pabulum by pouring into it an unwholesome excretion of any kind. Therefore, the writer does not believe that the ascending colon is an excreting organ at all, but is rather a macerating reservoir from which nutritive material is absorbed.

The Proper Field for the Saline Purgatives

There can be no question of the value and usefulness of saline cathartics, but they should be employed with a definite knowledge of their limitations as well as of their uses. They should not be depended upon to do what they do not do, and what in the very

nature of things they can not do. Some physicians use these salts to such an extent as almost entirely to exclude the vegetable and mercurial cathartics from their armamentarium. Such a course is not one to give the best results.

Surgeons also are depending largely upon the saline purges to empty the intestine prior to operations. The writer is sure that no such good results can be obtained from the salines alone as can be obtained from the administration of the vegetable and mercurial cathartics when combined with strychnine and atropine.

While the saline cathartic occupies a place, in fact fills a place that no other cathartic fills equally well, still, we should discriminate in our use of purgatives. When the action of a saline cathartic is needed because of its prompt action or its depleting effect, then it should be given; but this class of agents do not unload the entire digestive tract, and should not be depended upon for that purpose.

Emetine in Amebic Dysentery

The Report of a Successful Experience in Its Use

By J. F. ROEMER, M. D., Waukegan, Illinois

EDITORIAL NOTE.—Dr. Roemer permits his patient to tell a part of this story, thereby giving it a personal, human touch which brings its reality right home to us. Rogers' experiments in India seem to prove that in emetine we have the long sought specific for that scourge of the tropics, amebic dysentery. We are only just beginning to get corroborative reports from our own Southland, but others should follow rapidly. We invite experience.

FOR the benefit of the rest of the brethren, I want to report at some length my experience with a case of obstinate amebic dysentery, in which emetine finally effected a complete cure. The patient (my nephew) is the author of the first part of this paper, and also wrote part of the conclusion; the description of the treatment and the remedies employed, as well as the conclusions drawn from letters received are my own contribution. I have not seen the patient for six years, some 1800 miles intervening; hence, everything had to be done by correspondence. Had I lived in the city with him, much better results, no doubt. would have been secured.

Now let me quote from the young man's letters, as received from time to time.

The Patient's Own Circumstantial Story

"August 1, 1912. I first noticed flecks of bloody mucus in my passages, which latter came in the form of small, round lumps of about the size of hickory nuts. At this time I had that tired feeling, felt draggy, no ambition, irritable, but slept well and rested nights. Within a week, an acute diarrhea appeared, the desire to evacuate would be swift and imperative, coming on an average of eight times in twenty-four hours. More often than otherwise, there would be no passage except a little blood or mucus. I lost flesh and strength fast. So, on August 8, I quit work and consulted the company's medical man (an ex-steward of an army hospital), who gave me bismuth mixed in water; size of dose unknown. This did me no good. August 15, I went back to work, not realizing how serious the trouble was. I got no better.

"By August 28, however, my condition was so serious that I again quit work and went to my home in San Antonio. Mother gave me two tablespoonfuls of castor oil every night, and a 3-quart enema twice daily for three days. Then, there being very little improvement, we called the family physician, a Homeopath, who gave me some pills (not little pellets) to take. He prescribed rest; castor oil, one teaspoonful every three hours; and a diet of raw eggs, cereals, rice, and milk. We also kept up with the enemas, twice daily. Within a week, there was some improvement, and on September 10 I went back to work.

"The blood and mucus had never stopped entirely, and within a week after returning to work I was down completely and compelled to give up my job. We called the same doctor, who gave the same treatment as before, except that the pills were stronger than the first ones as he said. This was followed by some improvement in a few days. Then, on October 1, I went to Austin and started to work again, but soon laid off, be-

cause of sickness. So it went, up and down. Beginning October 10, I took heavy doses of castor oil for a few days, and once more undertook to work on October 15, and continued ten days, laying off on October 25. I again instituted a course of castor oil until November 1, when I went back to work once more.

"On November 8, my mother arrived on her way to Palestine, Texas, and I went to meet her at the hotel and to remain over night. Upon arriving, I felt about 'all in,' completely collapsing early in the evening, so that they had to put me to bed. All the while I had been working on 'nerve' alone, so, when I got under mother's protecting wing, my 'nerve' gave out and I gave up. I ought to have done so long before. My fault was the same as Cæsar's—ambition. The next morning we called an Osteopath, having heard of the success of these practicians with stomach trouble. The doctor gave me treatments, then said he could promise nothing as to results, and advised me to go to our home, where I could be nursed and cared for. He also advised calling in a medical doctor. He said he would like to try to accomplish a cure himself, but that it would be merely an experiment and taking a long chance; at all events, my sickness would last a long time. He declared, also, that I ought to be in a colder climate. So, two days after my arrival, on November 11, I was conveyed back to Palestine in a sleeping car, under the influence of morphine.

"Arrived home, we called, on November 12, an Allopath, who instituted treatment as follows:

"To begin with, the doctor put me on a diet of gelatin, junket, milk, and beef-bouillon. He gave medicine containing bismuth, creosote, and an opiate, to be taken in water every three hours. He also prescribed a medicine the name of which I have forgotten. Once a day he irrigated with warm salt water, using an enema-tube three feet long. In about two weeks my diet was enlarged to include nearly all the common foods, the treatment remaining the same. At about this time he recommended a course of Mulford's antidysenteric serum. We used thirteen doses of that, taking one or two hypodermics a day, as was convenient. The dose was 10 Cc. About three weeks later, in the first week of December, the Doctor stopped the irrigations and the serum; the medicine, though, was continued.

"The passage of blood with the stools had never stopped, while since the 1st of August I had had from eight to twenty movements in each twenty-four hours. At this time I still had about twelve calls in the twenty-four hours; however, the doctor said that the only thing required now was time and that he would not come any more unless we called him. He stopped his visits after December 13. We continued using his medicine, and I got up and began to walk around the house a little. Still, the bloody and mucous stools continued as before. My condition seemed to grow worse, and on January 4, 1913, I took to my bed again. I also stopped using the doctor's medicine at this time.

"I now determined to appeal to my uncle, Dr. J. F. Roemer, of Waukegan, Illinois, and he took charge of my case on the 8th day of January."

Thus far the patient's story, and I now continue to relate my own experience with this baffling case, and how emetine in the end "turned the trick." The reader, please, will remember that the patient was at Palestine, Texas, and that I was living at Waukegan, Illinois.

At the time stated, the young man's mother wrote me as follows:

"My son's bowels move from fifteen to eighteen times in twenty-four hours; they are thin, fetid, bloody, clear or mixed with mucus, bright-red or dark. The fecal matter is dark-green, or it is dark-red blood. There is straining at stool, with large quantities of gas passing." He was taking high enemas with the long tube, using three gallons of water. His diet was baked sweet potatoes, baked onions, baked apples, fish, cream of wheat, rice, eggs, milk junket, gelatin, cocoa, fruit juice.

The Author Undertakes Long-Distance Treatment

Upon the receipt of my nephew's request that I undertake treatment, I sent him one powder of merc. sol. c. m., with general instructions. The following data are compiled from subsequent reports sent by the patient.

January 11, 1913. The powder was dissolved in 14 teaspoonfuls of water, and one teaspoonful of this was given after each movement.

January 17. Patient had fasted three days, having taken nothing into his stomach except boiled water. Began to improve right away. There had been from eight to twenty-eight movements in twenty-four hours, but they now became almost normal in frequency On the 18th of January the patient had con

trol over his bowels, and there was much foul-smelling flatus. He craved salty food; wanted it highly seasoned.

I now mailed him merc. sol. 30th on No. 40 pellets, three to be taken four times a day.

The bowels moved seventeen times in thirty hours. There was not so much blood, but more of mucus and fecal matter. There was no movement from 2 to 6 o'clock. (This is worth noting.) No clear blood appeared in the stools. On January 20 the patient had eight movements in twenty-four hours, passing bloody mucus, thin fetid, but no bright blood. He felt sick at his stomach and vomited some bile. His pulse was 56; temperature 97° F. During January 22 and 23 he had eleven movements in the forty-eight hours, the discharges consisting of bloody mucus and one pint of thick fecal matter. His stomach felt better; the cramps were not so severe. The stools smelt like dead mice, the odor being very repulsive.

Learning the foregoing data, I wrote him, ordering a diet of rice-water and toast-water. The patient complained at this time of severe crampy pains through the upper abdomen; also of a burning sensation in the rectum from piles. His mind was abnormally active, going rapidly from one subject to another. He had a craving for graham crackers.

January 24. There were eight movements in twenty-four hours; these being dark, bloody mucus, thin, odor not so bad. Also some bright blood was voided.

January 25. I ordered a normal salt enema with glycothymoline to be given after each movement, as there seemed to be rectal irritation and the patient complained somewhat about his piles. No more pure bright blood made its appearance.

January 26. Diet was increased to pea-soup and barley-soup. At this time I learned from a belated letter of the straining at stool, after mucus passed, which caused him to bend over, double up, and leaving a not-yet-done feeling. Considerable gas escaped. Blood came after the fecal matter. The mucus a ways was more or less bloody, thick and stringy. The patient now craved sweet cakes, pie, meat-pie, bread and milk, and all forms of rich food, moist variety. The mind was very active. I forwarded another powder of merc. sol. c. m.

There now were nine hours between movements, five times in one twenty-four-hour period, with no blood the last two times. The pulse was 56, the temperature 97.6° F. On January 27, the diet was increased by adding orange-juice. There were six movements in twenty-four hours, with a 12-hour interval between the third and fourth movements. Little bloody mucus; thin fecal matter; no blood; odor more natural; no burning in the rectum. Patient had two movements on Saturday; no bright blood. On January 28 he took sac. lac. in water, as before. On January 31 he had four movements in twenty-four hours. Slight cramps; no bright blood; yellow, chunky, feathery mucus.

Is Pronounced a Case of Amebic Dysentery

At this time (early in February) I learned that one physician of the place had been requested to make a microscopical examination, and he pronounced the case one of amebic dysentery. Later, a copy of his report was sent, which reached me February 24, and it stated that the feces were found to contain amœba coli, mucus, blood-corpuscles and leukocytes. The gentleman was not prepared to make a test for Shiga's bacillus. The stain for tubercle bacilli was negative.

February 2. Sixteen hours elapsed between stools and the patient said that this was the longest period he had experienced since September 1, 1912—just six months. The cramps are almost all gone. February 4. The diet was increased to include grape-juice, fruit-juice, lemonade, meat-broths, and soup. Four movements occurred in twenty-four hours. On February 1, the bowels did not move all night; this for the first time in five months. It was twenty-one hours between stools.

Here let me call attention to a remark by one of the attending physicians, who said: "Do not be alarmed, it will be that way for a long time before he will be entirely rid of this; no blood in the stools, then lots and lots of blood."

February 6. Egg and milk was added to the diet. Twenty-four hours elapsed between the last two stools, and the last one was of fairly good amount and was somewhat formed. The patient still was using hot normal salt enemas containing one-fourth glycothymoline. These came away clear. The movements were twenty-one to twenty-four hours apart, and were natural in color, odor, and form. I now ordered (February 8) sac. lac. to be given as before. Jelly was added to the diet. On February 9 there appeared some blood in the stool; also large quantities of gas. The patient sat up in bed for about five minutes. February 11, the diet was

increased all around. Mucus still was coming away, also some blood. The patient slept four hours during the night for the first time in a long while. February 17, creamed dried beef and cream of wheat and rice were added to the diet. On February 18, blood and mucus appeared in the stools, the mucus being preceded by gas. The bowels moved once in twenty-four hours. February 19, thirty-two hours passed between movements. The enema came away clear.

On this date the mother wrote: "Although stools are farther apart, they are not so smooth, but sort of grainy-like; and they were this way even when he ate just broth." Not so well digested. The enema has been reduced from one quart to one pint, with one-fourth glycothymoline."

February 20. Boiled eggs and fish were added to the food. Some mucus was brought away with the enema, and a trace of blood. February 22. Clear mucus, little blood. March 1. Sac. lac. ordered.

By about March 5 the patient began to sit up in bed. But little blood or mucus was voided, though some blood and mucus must have been present all the time. His weight at this time was 100 pounds, his normal weight being 148 pounds. April 2. Out on porch. Powder of sac. lac. given. April 7. Sac. lac. April 12. Ordered to give but one enema in twenty-four hours.

Now let us leave the patient a moment and go back a little.

Learns About Emetine for Dysentery

On February 2, I was informed, as stated, that the trouble had been pronounced amebic dysentery. I knew nothing then of that disease. But about February 8 I read an editorial on amebic dysentery in the February number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE (p. 122), which spoke of emetine as a cure for that disease, as used by Leonard Rogers, of Calcutta, and reported upon by him in *The Lancet* for October 19 last, so I immediately wrote to the patient's family for a copy of the report of microscopical examination (already referred to above), and also to Dr. A. S. Burdick of THE CLINIC, asking him what he knew of emetine and about amebic dysentery. In reply I received, on February 18, a splendid letter from Dr. Burdick concerning emetine and amebic dysentery, together with the gracious offer to have prepared for me some hypodermic tablets of emetine, for trial in this baffling case. I at once, of course, ordered a supply, feeling sure that the laboratory report would show the case to be one of genuine amebic dysentery, and emetine the cure. However, great was my surprise when, upon receiving the report on the 24th, to find that no test had been made for the Shiga bacillus.

Conservative Doctor Objects to a Trial

By March 15 I received the consignment of emetine hydrochloride, made at the Abbott Laboratories into 1-8-grain tablets for hypodermic use, and without delay forwarded them to the patient, to be used by his attending physician, sending with it the splendid letter of Dr. Burdick's and asking that he use the emetine as directed, and to report directly to the manufacturing firm.

The last local physician in charge, when spoken to about this matter, said: "Now, you had better let well enough alone. I will make another examination and see whether it results the same. I know these people and also their products; some of which I myself am using with success. I do not know anything about this emetine, but shall do just as your brother thinks best. However, I believe that so long as the boy is improving, I should not try anything new. Should he get worse, though, or show that he is failing, we then might try the emetine." The doctor further remarked that he was watching the patient for signs of pellagra, and suggested that he be weighed frequently, and then be guided by that. This, certainly, is "expectant" treatment. The sick man at this time weighed less than 100 pounds.

The family thought best to do as the Doctor suggested. I, on the contrary, insisted that the new remedy be tried at once. Then came the objection from the other side: "He may have tuberculosis. I had better make a test for that, and if it is positive there will be no need to give the emetine, for then it will do no good." The Doctor made one test, but this was unsatisfactory. A second test was negative; very decidedly so.

In the meantime I was getting reports like the following:

Bloody mucus once or twice a day; straining after stool when mucus is passed. March 4. Bright blood and mucus. Bowels moved four times during the night; all thin watery stuff, dark-green in color. This has been so for a week. The patient feels very tired in mind and in body. Is sick at the stomach. March 7. Patient stronger. Bloody mucus. March 10. Bed is not comfortable any more. March 12. Two tablespoonfuls of bloody

mucus, bright-red blood; five times. Fecal matter, thin, green, at times yellow; poorly digested; some mucus. March 14. Sixteen movements in twenty-four hours; thin, yellow fecal; others consist of bloody mucus. At times, blood-dark; mucus, stringy and yellow. He loses control over the bowels; cramps; much straining. He feels weak and sleepy. This change commenced Saturday, the 11th, with passage of bright blood. March 16. Used glycothymolin, clear. He is somewhat better, had six movements in twelve hours, with less blood and mucus.

March 22. Tested for amoeba coli, with negative results. Then, as stated above, the Doctor wanted to test for tuberculosis, and did so.

Doctor Hoped to Cure Dysentery by Sunshine Walks

Then the Doctor called on the patient and said: "Get him out into the sunshine. He will come out all right. Get him a horse and wagon, and let him travel from place to place. Travel and sun and he will be all right."

On March 23 he used a dilator for the troublesome piles. Every night bloody mucus still was passing. March 29. Eight movements during the night; three movements during the day; thin, bloody mucus. Using the dilator; piles were better. Any pressure around the hypogastric region brought on cramps; even leaning forward and the strings of his pajamas were too much. There were cramps upon moving or exertion, and I feared an abscess of the liver. April 4. Piles better. Fecal matter thick, then thin. Bloody mucus persisting. Patient stronger. Face fuller. April 5. Piles better. Straining about gone.

Now I wrote, insisting: "Get busy; do something."

Family Decides Upon Trial of Emetine

The chapter of events at that end of the line will be omitted, but it will suffice to say that the family determined to give the emetine themselves. Let the boy finish the story. He wrote:

"Although I was much better than formerly, there was still blood occasionally, and cramps after each movement, so we decided to use emetine despite the doctor's objection. Unfortunately I was obliged to take the tablets by mouth, we being unable to use the hypodermic syringe.

"I started taking the remedy on April 10, when I took 3 doses of 1 tablet each; this making a total of 3-8 grain for the day, as each tablet contained 1-8 grain of emetine. Following is a record of the dosage to the end of the first course; viz: April 11, took 3 times 2 tablets, or total of 3-4 grain. April 12 to 21, took 3 times 4 tablets, or total of 1 1-2 grains a day. Interrupted two days (to notice effect), then continued: April 24, took three times 1 tablet, or total of 3-8 grain. April 25, took 3 times 2 tablets, or total of 3-4 grains. April 26, took, 2 times 3 tablets, or total of 3-4 grain. April 27 to 30, took 2 times 4 tablets, or total of 1 grain. Then, from May 1 to May 5, reduced the dosage to twice daily 3 tablets, or 3-4 grain total for each day. This concluded the initial course of the treatment, as brilliant as it was gratifying to all concerned."

The Magical Effect of Emetine

Under date of April 27, the patient's mother wrote me as follows:

"We have seen no blood or mucus in his discharges since the first night after he began to take the emetine. He is gaining in strength rapidly. The only alarming symptom has been the voiding, on one or two days, of a mass of dark coagulated blood." And, in his letter to me, the boy wrote: "The emetine worked what to us was a veritable miracle. The blood stopped coming, and I began to improve rapidly. We now have stopped the use of the emetine entirely and are awaiting developments."

Later letters informed me that on May 13 there was a slight showing of bloody mucus in the stools; the fecal matter though, was formed. From that date till May 17 no blood was passed. The bowels had moved every morning just after the patient got up, but he remarked: "They do not get me up—I get up."

On May 23 they wrote that the patient still was using the emetine—3 tablets every night just before going to bed. He now was helping with the work; walked twelve squares; weighed 133 pounds; was gaining right along. [It does not appear when the remedy was resumed after the 5th of May.—Ed.] June 2. Still improving. He overdid things, and white mucus showed up once in the stool; but no blood. The emetine was stopped May 26. The following letter dated June 11, was received by me, and it will close this all too lengthy account of this interesting case:

"Am feeling well. Getting strong right along. Stools are forming up pretty well. Digestion is good. I drink a cup of hot lemonade before each meal. Expect to leave

for Riveria, Texas, on Saturday night. Shall be careful. Your nephew, C. E. Roemer."

The young man further, writes, and I say with all my heart; "All hail to THE CLINIC, to the Abbott people, to Dr. Burdick, and to emetine. I am well once more!"

[In connection with this report be sure to read two brief articles regarding emetine in the department, What Others Are Doing, in this issue. These throw more light upon the methods of using emetine in dysentery, diagnostically as well as therapeutically—ED.]

Spondylotherapy: A New Therapeutic Method

Its Value for the General Practitioner

By S. EDGAR BOND, B. L., M. D., Richmond, Indiana

THE world in general does not appreciate an innovation, any change in its habits or any thing which will disturb its preconceived notions even when they seem likely to contribute to the greater happiness of the human race at large.

Unfortunately for medical progress, this attitude in the medical profession is particularly bitter against anything new, and any individual who proposes any advances or dares to cure an incurable disease, so called, is the object of such abuse that he is indeed a lion-hearted man, fully possessed of a truth, who ventures to face such opposition. Frequently because of this attitude brilliant discoveries are lost to the medical profession or die with their individual successes.

We have no doubt the originator of spinal manipulation had this spirit of the medical profession to consider when he gave to others than medical men the spread of the gospel of his findings.

Had he not done so, we should not today have the work of spinal therapy upon so firm a foundation. Their self-limited field has exhausted its resources, but has given us some solid truths. But progress will not stand still even in spinal work, and it is up to the medical profession to make broad the work that narrow men have given to us.

Had the originator of spinal therapy given it to the medical man, the latter would have garbled and subordinated it, until it might have shared the same fate as "606," whose brilliant successes were everywhere hailed with such praise, when we listened to the original instructions: to use without mercury, since those freest from mercury responded best. Now , instead of trusting to "606," our minds have become so entwined with mercury in blood dyscrasias that we must mix in more and more mercury, and with less and less praise and success to the once heralded and highly tested specific of Ehrlich.

At first thought we may fear for the success of spondylotherapy for the same reason; but on second thought I am convinced, because of its scientific basis, the process is but a winnowing one, and now in its present status, by giving the medical men of the country the means of using spinal work in their daily practice, we at once begin the process of separating the accumulated chaff from the wheat, all for the benefit of our patients and the truth of spinal therapy.

There is too much of truth and success in spinal therapy as practiced in the narrow cults, and such splendid scientific revelations in store for the daily practitioner, that spinal therapy cannot materially suffer in its newer and broader sense, as it already has been worked out by scientific medical men.

Spinal Therapy Now Recognized Professionally

The fact that men and women foremost in the ranks of scientific medicine are investigating and using spondylotherapy in hospitals and daily practice with such remarkable success in the cure of socalled incurable diseases has aroused the interest of the medical profession as few things have done in the last few years.

It has so far passed the point of vituperation by the profession that it has almost reached the point of ready acceptance.

The treatment of bodily disease, whether functional or organic, by numerous means other than manual manipulation through the spinal cord and its nerve ramifications has passed through the experimental stage.

Thanks to such men as our well-known scientific writer and investigator, Dr. Albert

Abrams, of California, whose half a lifetime spent in original work for the advancement of the medical profession, and who is especially quoted at present because of scientific provings along the lines of spinal work, we are freed from the vague uncertainties and unscientific pretensions which have marked the reign of the charlatan and honest but narrow misguided spine and bone manipulator. It was he who originated the term spondylotherapy and taught us how to use reflexes of the body both to diagnose and cure disease.

What is Spondylotherapy?

Spondylotherapy is the science of evoking the reflexes of the body both to diagnose and to cure disease. Even the laity know that nose-bleed may be stopped by cold to the back of the neck and that heat will relieve pain; both causing reflexes of relief.

Unconsciously the osteopath and other spinal manipulators have evoked spinal reflexes and cured disease. Many of their good results have been due to freeing tense ligaments and muscles, thus securing an adequate supply of blood and freedom of passage of nerve impulses. This has been done very largely through "deep massage," the manipulator ofttimes using the bones as levers in the process.

The old idea of the bone out of place causing *all* disease is being gradually disproved, not only by investigating physicians, but by scientific investigations conducted by osteopathic physicians themselves.

The refusal of physicians as a whole to take up the work of spinal therapy, because of the unscientific statements, together with the demand of the people for spinal treatments, has made for a low standard of "cult" education. Indeed, the conditions were ripe for the "barber osteo" and "stable boy" chiropractor undertaking to equip themselves in a few months for "splendid financial returns."

But the pioneer work of investigation has been done, first without and now within the medical ranks, until today we find hundreds of practical scientific clinicians, educated in all lines of medicine, taking up the work from its new scientific view, testing it out, and finding it adding to their efficiency.

It will not be many years until the osteopathic practitioner will become a practitioner of medicine, or, osteopathy may become in its broader sense as much a specialty as surgery, or ophtholmology—representative of special skill in medicine.

No sooner did scientific medical minds begin investigating and casting out the "rot," than many new and startling truths were discovered, and, not being limited in views, instruments or means of pursuing his studies, his findings became so deep and broad that the narrow "cults" seemed narrow indeed and their means of cure laborious. The practice is being forced into the hands of medical men today because of their cosmopolitan skill.

This is as it should be. The issue favors the physician, for the people are unconsciously choosing the osteopathic work for some conditions and the medical man for others. But ask any of your patients who are taking spinal work from the irregular "manipulator" (providing they "inform you") as to whether they would prefer risking their disease to the narrow spinal man or the physician spinal therapist, and the answer will favor the latter.

The General Practitioner Now Must Investigate

It is now up to the general practitioner to investigate and use these findings in his daily practice, and physicians everywhere must, in order to keep up with the times, pursue special study through postgraduate courses, and the schools of legitimate medicine must add spinal therapy to their curricula. If they do not, men and schools will take up these new truths and make use of them in a way not so easily controlled.

We realize there are some self-constituted "censors" of medicine who, without study of the breadth of spondylotherapy and investigation of the spirit of its founder, are fearful there is a new "cult" appearing upon the already overcrowded medical horizon.

On the contrary, spondylotherapy, or reflexotherapy, appears as the latest and most scientific adjunct to the practice of medicine. No one who is a student of it in its newer sense fears a cult unless medicine refuses to accept evident truths. No one who is practicing spondylotherapy is using it exclusively. In fact, its author and the many taking up the study are recommending so many things to secure the reflexes of the body it precludes it from becoming a separate practice as does also its complex nature. Its use will turn back clinical medicine into its own. It goes to the bedside, studies disease in the human body, gives to us more accurate means of diagnosis and definite means of cure.

We have permitted the laboratory man to diagnose disease and produce remedies and apply them to the human body as if it were

a crucible or a test tube. We have neglected clinical diagnosis and clinical medicine. We have forgotten chemistry was destructive and we were dealing with a vital entity at our bedside, a living force misdirected, a *disease*, an exaggeration or a depression.

The osteopath emphasizes a truth when he considers nature able to functionate properly, merely being prevented by displaced bones. The chiropractor considers 95 percent of all disease caused from an occluded spinal window. His "thrust" is supposed to correct the occluded window and to enable nature to functionate properly. The masseur finds the vital force inherent, active, ready to functionate, but hindered by congestion of the organs, which he seeks to correct.

We have been prone to regard fever wholly as the disease, and reduction of the fever was the object sought after in attempting a cure. We have considered inflammation an enemy to be combated, instead of the evidence of the body's struggle against disease-producing organisms.

In the pursuit of the study of spondylotherapy we shall find these pentup forces of nature can be utilized to diagnose, control, and even to cure some of our most hidden and hopeless diseases. Such diseases as aneurism, exophthalmic goiter, locomotor ataxia, infantile paralysis, are not only being relieved but cured by the direct application of remedies and means direct to the spinal centers, and other chronic diseases are cured with a certainty that is startling.

Importance of the Reflexes in Diagnosis and Treatment

The physician who uses spondylotherapy must again thoroughly familiarize himself with the spine and its nerve ramifications. We have previously looked at it from its anatomical relations, its normal physiology, and in a few diseases from its pathological condition. We must now look at it from its clinical value, as a center for giving curative impulses to pathological conditions in any part of the body or for inhibiting exaggerated activity. In fact, all our activities, even the process of digestion, are the result of stimulation of the reflexes: first appealing to the senses and then mechanically exciting the various digestive processes.

It is not a dream, but an actual fact, that stimulation of certain centers of the spine will increase the flow of the digestive juices, and inhibition of others will cure hyperchlorhydria.

The physician who wishes to use the reflexes of the body will find certain segments of the spinal cord invariably give off certain nerves to certain organs and portions of the body; also, every portion of the body can be mapped out as sensitive (or reflex) or anesthetized portions. The utilization of these centers is in its infancy, and we freely predict that when that vast number of scientific everyday practitioners add their investigations to those comparatively few now interested in original investigation we shall have gone a long way toward changing medicine from an art to a science and replacing galenical medicines with the single remedies, pushed to effect.

The uniform results obtained by utilizing these reflexes to organ and periphery will take electricity from its socalled psychic effect in the hands of inexperienced operators to one of definite therapeutics. Our use of electricity to "stimulate" has been on a par with our complacent "giving some medicine."

We are studying to simulate nature's impulses, so as an aid we use sinusoidal electricity graduated in frequency to the needs of the parts we desire to treat. For instance, in neurasthenia, where we so often have abdominal organs surcharged with stagnant blood and loss of all nerve tone, we place the electrodes on either side of the seventh cervical spine and turn on the slow sinusoidal current. We shall have a contraction of the abdomen and a consequent emptying of blood, and at the same time we are stimulating the greater splanchnic nerve, which stimulation is reflexed to the abdominal periphery.

In diseases of women, uterine reflexes may be utilized with uniform results not now realized. By applying an electrode on either side of the first, second and third lumbar vertebras, a retained placenta has been expressed from the womb and nature fortified to resist infection.

The surgeon, in appendicitis, has ofttimes been surprised, on opening the abdomen, to find so little trouble with the appendix in keeping with the intensity of the symptoms (and the same may be said of ovariectomy, etc.), and has been chagrined to find so little relief following the operation. Spondylotherapy places in his possession a definite means of diagnosis. It terms them pseudo disease. By inhibiting the reflexes at their origin at the spine, we cure the cause and the organ becomes normal too quickly to be in need of operation. Here

we have a reflex irritation and no organic change.

Some Convincing Proofs

To the doubting physician we offer two experiments to test the reflexes. In the first place, firm pressure over the seventh cervical vertebra will reduce the heart beat. Secondly, if you have a case of exophthalmic goiter, you will find that concussion over the seventh cervical vertebra will cause a reduction in the bulging of the eyes as well as of the size of the goiter; while, on the other hand, constant deep pressure between the third and fourth dorsal vertebras will give rise to a corresponding bulging.

Almost positive proof of our diagnosis may be obtained from the fact that tenderness at certain spinal segments reveals disease at certain centers. Thus, for instance, tenderness over the fourth lumbar of the female would indicate uterine trouble; at the third, ovarian; if tender on the right side of the second lumbar, the appendix; at the tenth, eleventh, twelfth dorsal, the kidneys. So for other ailments. This fact ofttimes is indicative of the heavy loads of work these nerves carry and may be an effort of the ganglia to react to pathological demand.

A well-known, albeit recent, student of reflexotherapy, enthusiastic with his results, was bewailing his failure to trust its keenness of diagnosis and related an experience. "Mr. X," he said, "one of the wealthiest men of our city, called me to his home, where I found him suffering very keenly from an acute pain in the region of the appendix. My only thought was an urgent operation, until my examination of the spine failed to reveal any tenderness over the second lumbar—that is, the appendix—area, but did demonstrate extreme tenderness over the kidney segments. Fearful of risking my diagnosis of acute nephritis, I sent for the surgeon, and our final decision was to wait till morning and to operate if the symptoms did not subside. However, chemical examination by a third physician revealed unmistakable signs of nephritis, and remedies directed to the kidneys, together with spinal methods of renal stimulation, gave the patient relief before morning. Complications following the proposed operation would, I am sure, have proven fatal."

The x-ray-man has revealed that we were unable to pass the colon-tube beyond the sigmoid flexure; now, by the aid of the reflexes, he has again proven that it is possible to pass the tube to the appendix, if necessary, by pressure upon the eleventh dorsal spine, this opening the way, no force being necessary, providing the patient is in the proper erect position.

Again, we can now do what has been considered impossible: namely, pass a stomach-tube from the stomach into the duodenum by properly exciting the pyloric reflex of dilatation at the fifth dorsal vertebra. The value of this is obvious, for by its aid we can now examine the contents of the duodenum and find the extent of pancreatic and liver functioning.

The digestion of starches, with which more than one-half of all stomach troubles are concerned, can now be helped as never before by quickly emptying the stomach-contents into the intestines, where the amylolytic process can properly be carried forward before gastric fermentation can set in. Hyperchlorhydria can be robbed of its terrors and gastritis can be relieved, by reason of our ability to free the stomach of its contents.

Many who read these statements will exclaim, "Those are visions!"—if indeed they stop at such polite terms.

A friend of mine recently, after he had seen the eyes of an exophthalmic patient recede and protrude under the excitation of the reflexes, and had the same confirmed by a third physician, said, "I saw it but don't believe it."

To many who have never heard of spondylotherapy and who do not realize the splendid advances being made along reflex investigation by men who are recognized at home and abroad by reason of scientific prominence in other lines, it may be well to give a few proofs as worked out by these men, and especially by Dr. Abrams, before they gave to the world the result of their experiments.

Dr. Abrams, before the spondylotherapy convention in Chicago, performed several experiments as proof of some of his contentions. As proof that the stomach reflex is available for emptying the stomach he first palpated the stomach at rest and outlined the same with a skin-pencil. Then the subject drank a glass of water, and the doctor palpated and marked the outlines. Then he excited the pyloric reflex of dilatation, and the water passed into the duodenum and palpation showed the return of the stomach to the original position.

By experiment, stimulation at two points, i. e., at the seventh cervical and second lumbar vertebrae, was shown to change the position of the stomach by shortening. It was desired to find which could be used to the most advantage in increasing motor sufficiency of the

stomach, thus lessening a large percentage of stomach disturbances.

By introducing a toy-balloon, fastened to a tube, into the stomach, and attaching this to a manometer and inflating the walls of the stomach, the outlines of the stomach were clearly visible. One now was able to see the greatest change in the position of the stomach when exciting the reflex at the seventh cervical spine, and we now know we can treat motor insufficiency of the stomach best through the seventh cervical. Similarly other organs can be treated and findings proved as easily, if the physician will but test a few patients for his own benefit.

Many physicians claim they are exciting the reflexes by osteopathic means, others by chiropractic, and others feel they must aid spondylotherapeutic treatments by massage and Swedish movements. With these we have no quarrel; the fact merely emphasizes the cosmopolitan view with which we must in the future approach the practice of medicine.

The fact that the author uses successfully any of the above methods in his daily practice, if necessary, will merely lend force to his statement that the methods of the cults seem narrow indeed and that the practice through the reflexes of the body is yet in its infancy. It cannot supplant scientific medicine, but is its handmaid, and the greatest foe to the careless use of the unreliable galenicals and shotgun prescriptions, and of the patent-medicine vender, just as broad, scientific medicine is always a foe to quackery in all its forms.

The large list of well-known scientific medical practitioners from all over the country who recently met in national convention at Chicago, for the purpose of studying together spinal therapy, was a revelation, and no one who takes up the study today need fear he will ever degenerate into a "spine-pummeler" but, rather, he will be able to meet the demands of his patients in a new, scientific and satisfying manner.

How I Treat the Gastroenteritis of Childhood

By JAMES H. BRISTOW, M. D., Portland, Oregon

EDITORIAL NOTE.—In connection with Dr. Bristow's paper be sure to read the intering contributions by Blanchard, Lynch, Wolverton, and others, in this issue, all dealing with various phases of "summer-complaint" treatment. Taken together, these articles form a symposium of exceeding value, and one which all of us will certainly enjoy.

IN ORDER that I may be clearly understood, let us assume that the disease in question has been in existence less than twenty-four hours, and that it is confined to the stomach and to more or less of the small intestine.

The attack is ushered in by vomiting, and, if the day is hot and the atmosphere very humid, there probably had occurred one or more convulsions. Vomiting continues whenever food is taken. There is diarrhea, unattended by pain; the bowel movements consisting of sour, green-colored stools. The skin is hot and dry, the pupil somewhat small, the temperature is moderately high. Or, if there has been a convulsion, it is very high, and there is a rapid, full pulse, I conclude that the convulsion was the direct result of the high temperature—therefore, the first and most important consideration in instituting the treatment.

If the temperature is reduced, and kept down, there will be no more convulsions. This is of the utmost importance, for, be it remembered, a severe convulsion (or several convulsions) occurring in childhood is apt to leave its mark on that individual for the rest of his life.

A cold-pack to the head will relieve the congestion of the brain and prevent more spasm, while we have at command a moment in which to consider the etiology. We now have the little one's head wrapped up completely in a big cold towel, with only his nose sticking out, so that he can breathe.

The Etiology in Relation to Cure

A glance at the etiology will give us an unfailing principle for the development of a cure. Fermentation is progressing within the digestive organs of the child, causing the production of ptomains or toxins; or, in simple words, poisons are being formed in the stomach and bowels that are making the individual sick. Therefore, if we take means to remove these poisons and take care to

introduce no more, it is perfectly obvious that the patient will be cured.

This seems so simple as to be almost unworthy of notice; nevertheless, it is a principle the application of which is practically infallible and unfailing. Even those patients in whom the disease has progressed beyond the first stages may usually be cured by putting this idea into practice.

Our sheet-anchor for the removal of the poisonous material is calomel. It should be given in tenth-grain doses, each hour, until there is a change in the character of the stools. In all instances at least one full grain should be given, no matter if the changed stools do appear before the whole grain has been given. A dose of castor oil is the logical sequence to the dose of calomel; but it is not always necessary. The vomiting will have ceased by the time the full dose of calomel is finished; provided, that the second part of the proposition is carried out; that is, that nothing has been put into the stomach to renew the poisons.

What Food Shall We Give?

There are just a few things that may be fed to such a patient without upsetting the second part of our proposition. My preference is oatmeal gruel. The gruel should be prepared with a deal of care. It should be cooked for at least three hours and when finished should resemble in appearance rich milk or cream. It may be flavored a little or sweetened with milk-sugar. No child will refuse it when it is properly prepared; and it will sustain life for many days. Indeed, I have had greatly emaciated children, who had been ill for many days, gain weight on this gruel. It is safe for at least two or three weeks' use, if necessary.

Now I have the child's digestive tract clean, have a cool pack on its head, and have had time to make some gruel (provided I did not decide to withhold all food for a while); but I have been doing some other things in the meantime, for, surely, there were other indications from the first.

Here is the time when the active principles really "do shine." The hot, dry skin and the (possible) convulsion were labeled "aconitine," just as plainly as though it were written out for one. The pupil unerringly tells one the call for atropine.

I put the granules into 24 teaspoonfuls of water: one granule of aconitine for each year of the patient's age, and one extra, *because;* and one granule of atropine for every two of aconitine. One teaspoonful of this solution is given every half to one hour, according to indications; being continued until the temperature falls, pulse quiets, nervousness subsides, when it is given every two hours, or so, apart. You may be sure that the most irritable stomach will not reject this mixture.

One Case—Medicine More Bulky Than Food!

I am reminded, at this point, of an instance where I visited a little patient, on an emergency-call, the regular attendant being unable to come at that hour. There were reposing on the table numerous vials, filled or partly filled with medicines for which prescriptions had been written. Careful inquiry about the giving of medicines and nourishment disclosed, to my amazement (spelled, amusement), the fact that the patient was taking for the twenty-four hours just twice as much volume of medicine as volume of food. Would you rather be that patient or an "alkaloidal" patient?

The digestive organs being clean and having secured the desired action of the aconitine and atropine, I now turn to a reliable druggist, writing a prescription for the combined sulphocarbolates in appropriate dosage. Additional smaller doses of calomel may be needed before the recovery is complete.

This Method Will Cure

The measures here outlined will effect a cure in nearly every case, even though it be of longer standing than the one described. I use the word "cure." It is rarely enough that we do really have a chance to use that word. There is one thing that we lack, however—a remedy that can be given almost from the first, in these cases, that would have an action similar to that of sodoxylin. I feel that it is a loss not to have some such thing. Somebody hurry and think of something that will do.

Conclusions

Bismuth and similar oldtime socalled soothing doses have no place in this scheme of treatment.

Active principles give us the opportunity to practice in our treatment the theory based upon the etiology, namely:

If the poisons in the digestive tract be removed, and no more poisons introduced, the patient will be cured.

Feeding with broths is condemned, because the extraction of broth from meat also extracts those very poisons we are so anxious to avoid.

Simplicity in the application of remedies has always done more than the most complex and laborious prescription.

Well-applied treatment the first day of the illness is so very valuable that thousands of lives would be saved every summer were it always possible to see the patients early.

You may say that I have been mixing etiology and pathology. Perhaps; but I do not think so.

Save the Babies

A "Talk" About Summer Complaint

By C. ELTON BLANCHARD, M. D., Youngstown, Ohio

SOME years ago the writer fell into conversation with an old physician about the treatment of sick babies, especially of the formerly nearly always fatal "summer complaint." We were riding in the car from Akron, Ohio, to Cleveland. It was our first meeting, and I have no doubt the doctor expressed him mind more freely then to me than he would have done to a fellow practician of his home town.

"I tell you what," said the doctor, "when they want those babies to die, they should call me. I seem to lose them every time." And so he went on bewailing his "bad luck" with babies, as he called it.

I was then a senior student, and I determined to learn, if I could, why this doctor failed with babies. I feel sure now that I know, and my hope is, to help those who "have bad luck with babies."

I have neglected to say how thoroughly this physician emphasized the fact he had always followed the treatment laid down in the books. He practiced according to rule and rote. He followed precedent. And then he could not understand the reason for his failures. Naturally, this man was thoroughly disgusted and discouraged. I have often wondered since then whether he ever did learn what was wrong about his treatment. Hope our friend is living and may read this paper.

Intestinal Autotoxemia Covers all Forms of Infantile Diarrhea

Most babies die of what may be termed diarrheal diseases. It matters little how we label the diagnosis—whether simple atrophy, marasmus, etc., for the chronic state, and cholera infantum, enteritis, etc., for the acute condition—the general term autotoxemia covers the whole thing. In brief, the pathologic state is the consequence of an invasion of bacteria of one sort or another into the digestive portion of the child's alimentary tract, and of the subsequent absorption of toxins and ptomains into the blood stream.

True, there may be ulcers and a dozen other complications. A child may be syphilitic and it may suffer from malnutrition and autotoxemia at the same time. I have recently had such a case, which several physicians diagnosed and treated as "maldigestion," but failed to recognize the lues, because the family history was good, or at least seemed good.

I am not going to discuss congenital syphilis, for that is another story. However, the keen observer will not fail to recognize the syphilitic baby when he is consulted for malnutrition. He takes nothing for granted. Bichloride of mercury will do wonders for these luetic babies—bother with nothing else. But let us return to our subject.

Two classes of baby-cases will most frequently come to you. The acute condition, called "milk-infection," and the chronic, slow-wasting disease that is called, by some, simple atrophy, marasmus or malnutrition. It is idle to classify these cases, other than as acute and chronic, because the etiology is the same, and likewise the treatment, or at least is largely the same.

Some mothers will tell you that the baby weighs less at, say, two or three months than when it was born. Examined, undressed, you will find a pale, skinny little thing, every bone of the body showing through the skin, and the latter with a peculiar transparency that might make one think of the old saying, "He is too poor to cast a shadow."

Some years ago diligent bacteriologists—Booker and Jeffries in America and Escherich and Baginsky in Germany—thought they could discover a specific bacterium for cholera infantum. These and other research-workers failed, as we might know they would; for, these troubles are an autotoxemia and usually are caused by the normal colon

bacilli invading the small intestine and there inaugurating food putrefaction.

Picture of an Acute Attack, and the Old-time Treatment

The typical picture of the acute condition is a sad one, indeed. The little patient lies with deathly pallor, eyes sunken into their sockets, and presenting that peculiar facies —fear, anxiety appealing to our pity expressed in every line and emphasized by its whining, helpless cry. Often the stomach revolts and the usual feeding process is interrupted by persistent vomiting, bringing up bile, colored or blood-tinged mucus. The mother is sure the baby is starving to death and is constantly sending down more material to add more putrefaction.

The stools soon exhibit the greenish color and musty odor, and often are watery and sometimes flecked with blood. The pulse becomes thready and rapid. The fever runs high, around 102° to 104° F., and often, in fatal cases, up to 106° or 107° F., or even higher just before death. The whining cry becomes a moaning, and the stupor or comatose state usually follows, ending in death. Now and then the sick child may show the excitable state, delirium, rolling of the head from side to side, often with it thrown back, as we see in meningitis.

There, doctor, is your patient; what are you going to do for the innocent little fellow?

There is no use to stop to deliver a well-worded tirade against the seemingly growing practice of bottle-feeding instead of nursing in the old-fashioned way. We need not talk about prevent on, pure-milk supply, aseptic-bottle devices or any of these things. It is too late now to expound the merits of Somebody's malted milk or the value of modified cow's milk, and all that. Here is your patient. What are you going to do?

The old way was, to give calomel and laxative salines, belladonna and opium. "Administered in this way—" I quote from one medical luminary—"and, the patient *being still kept under the influence of opium*, I doubt if these medicines cause any increase of peristalsis." (The italics are mine.)

Is it any wonder the old-time doctor lost his babies?

Nature making a desperate effort, by vomiting, purging, elevation of temperature, and all that, to get rid of the poisons and their cause, then this good doctor doing his best to lock up the secretions and excretions, paralyze the bowel and establish a full surrender? May heaven forgive us for all these little graves—we cannot forgive ourselves, as physicians.

How the Modern Rationalist Proceeds

The rational treatment is to recognize here a toxic case, just as if the child had eaten a meal of bad food—a can of spoiled salmon, let us say. The first thing is, to stop all feeding. I am now treating the acute condition, remember. Stop piling more fuel on the fire. Not a drop of milk, good or bad. What we want, is water; pure sterile water and lots of it, inside and out. Raise Cain around the place. Tell mamma and grandma w'at's w'at! Dump all the foods, good, bad, and otherwise.

Now clean out and clean up this baby. Start at both ends. Irrigate the lower bowel —warm water and soap -good castile soap. Next use cool water and some tannic acid—about 20 grains to the pint. I have frequently used as intestinal antiseptics, the combined sulphocarbolates, for making these irrigation solutions. Later, when we have cleaned house somewhat, copper arsenite comes on the stage. It seems to help the gland-cells and restores the secretory functions.

Cool-water bathing of the skin and water feeding will do much to restore the proper temperature. When the several hydrotherapy-stunts have been properly done, I have no objection to calomel and a saline laxative. Whether this is necessary or not depends upon how much fecal mass still may remain in the intestine. The point is, *clean out*; but don't purge just because that is the rule. If the folks think the child will starve, bluff them with barley-water or a little beef-juice.

If the fever still runs high after the use of water inside and out, control it with aconitine, digitalin, and veratrine. That admirable granule, called defervescent compound No. 1, fits most cases very well. If the child is restless and of the excitable type, a few doses of Waugh's anodyne or the "calmative for children" combinations will take the edge off the nervous centers and give the much-needed sleep.

Meantime, get after the cause by the use of intestinal antiseptics. Copper arsenite and zinc sulphocarbolate in proper dosage to suit the age of the child will usually do the business. Also, I have used, both in acute and in chronic cases, the following prescription:

Menthol	grs. 2
Eucalyptol	grs. 2
Glycerin	drs. 2
Boroglyceride	dr. 1
Syrup	drs. 2
Water, enough to make	ozs. 4
Carmine, to color.	

In acute cases, give one teaspoonful every hour; and when food is resumed, a teaspoonful after each feeding. Give it after each feeding in the chronic cases. The mixture is a harmless antiferment and antiseptic and may be used *ad libitum*. In many cases of the chronic type nothing more may be needed than this medicine, unless perchance it be a help to digestion. If the intestinal trouble clears up, but the child still passes undigested food and vomits the curds, I have used with good results the essence of pepsin, essence of caroid, and other digestants.

What to do in the Chronic Type—Marasmus

In older children presenting the chronic condition called simple atrophy, or marasmus, we may have one of several complications to combat, including erythemas of several types, herpes, eczema, boils, and so on down the list; sometimes stomatitis ulcers are very troublesome. Usually, however, all these troubles disappear when the digestive tract has been restored to normal by means of the antiseptic agents.

We have in the arsenates of iron, quinine and strychnine with nuclein such a valuable combination for all eczematous skin lesions that I long ago left off prescribing Fowler's solution and other arsenic preparations. This remedy may be used in proper dosage to fit the sick child's age.

When, either in a chronic or in an acute case, the stools appear normal and the general condition is good, the rest of the battle is to insure proper nutrition. You may prefer sterilized and modified cow's milk with lime water or barley-water. Also, your patient may express some decided preferences that you may find it necessary to heed. Thus, I recall an instance where the child would retain nothing in the way of food, until we tried plain custard; on this it thrived and made a remarkable recovery. I say, remarkable, because, when brought to my care, the baby was so near the end that none of us expected to save it. In this case, normal salt solution was administered by the rectum until pulsation could be felt.

The problem of feeding I am not discussing. I am asking now for nutrition—get it by any means you can. You may rub some nutriment into the skin, such as olive oil. But, while all this is going on, *do not neglect the intestinal antisepsis*. You have not only to clean out the house, but you must *keep it clean*. Clean out, clean up, keep clean.

I am as much opposed to the use of atropine or belladonna in any form, as I am to the giving of opium in these cases. In fact, symptomatic treatment as a rule is unnecessary. Why be alarmed at a little fever? Just as in typhoid fever, there is no need to make such desperate efforts to keep down the temperature. Fasting is the nature-way of curing any intestinal disease. Fever is your index, your barometer. Why destroy it? When alarming, control the temperature—that is well enough; but for a child 102, 103 or even 104 degrees is not alarming.

Atropine suppresses the secretions, flushes the capillaries of the skin, checks the action of the leukocytes, diminishes or stops the flow of the digestive secretions, urine, and sweat. In short, atropine here does the things we do not wish done. So, why use it? Many physicians will concede the harm that follows opium in these conditions, but, still, will use atropine. Let them come forward now and give us some good reasons for this position. I am sure the editor will grant liberal space.

A Brief Recapitulation

Now to recapitulate: Autotoxemia causes most of children's troubles that are not of a contagious or infectious nature. It is the cause of most of the deaths of infants. The cause of autotoxemia is the invasion of colon bacilli and other kinds into the digestive portion of the alimentary tract, with attendant food changes other than those of digestion. The cure is made by ridding the body of putrescent material and sterilizing the digestive tract. The symptoms needing attention are easily combated when the cause is removed.

It will be some years, and perhaps some generations, under the present economic system, where poverty and unhygienic living are the rule, before preventative medicine can prevent these sicknesses in babies and children. Infant mortality is the price, or a part of the price, we pay for profits that produce two classes of our people, the rich and the poor.

There need be but few, if any, cases of this sickness in children. Yet, among the middle class or those able to live properly, we find these cases, because of hygienic and child-culture ignorance. Physicians who might teach the right way do not do so, because they do not make a living in that way. When doctors are paid to prevent sickness instead of curing it, there will be little need for such a paper as this. Indeed, I am not sure as to how many it will help even now. However, 'ere's 'oping!

Infantile Colic

How to Diagnose it and How to Treat it Intelligently

By W. C. WOLVERTON, M. D., Badger, Iowa

COLIC may be defined as "any severe paroxysmal pain occurring in the intestines" (Holt); or "any severe paroxysmal pain in the abdomen due to distention of the intestine" (Duane). "Colic" is a name for a symptom only; but it is so common in infancy, and so often requires treatment of itself, that it deserves special consideration.

Causes Giving Rise to Colic in Infants

Colic in infants may be owing to any one of many causes. It is a regular symptom of almost all the functional and inflammatory diarrheas, of appendicitis, intussusception, ileocolitis, and occasionally of ascarides when the latter are numerous and occurring in tangled masses; it may also be caused by the swallowing of foreign bodies or the seeds of fruit.

In the various conditions enumerated, colic is only *one* of the symptoms, although it may be the most prominent one. It may, however, occur without simultaneous diarrhea, vomiting or presence of foreign bodies; and here it is caused by flatulent distention of the intestine and by irregular peristalsis. The distending gases are formed by fermentative changes in the food-contents of the alimentary canal. It may occur both in breast-fed and in artificially fed babies, but is more common in the former class. In either case, the food generally contains some indigestible constituent, and this usually is the proteid.

In colicky, bottle-fed infants, excess of proteid content of the food is shown by the presence of undigested curds in the stools. Fully 80 percent of the colic in early infancy in artificially fed children results from this cause. Excess of carbohydrates also may produce colic, which is then accompanied by thin, green, very acid stools, these sometimes causing marked irritation of the nates. It is in rare cases only that an excessive fat-content in the food gives rise to colic.

As already remarked, colic is most commonly seen in breast-fed infants, and it occurs with greatest frequency during the first three months of life. Here again the great majority of attacks are due to excess of proteids in the mother's milk.

A very prolific cause of colic, both in breast-fed and in artificially fed infants, is overfeeding, both as regards quantity and frequency of feeding. But very little attention is paid by mothers and nurses to the cultivation of good nursing-habits in babies. The almost universal prevalence of irregular and unsystematic feeding of infants is shocking alike to the pediatrist and the general practitioner who are honestly trying to teach the laity the importance of *system* in this respect. How often we see the nipple poked into an infant's mouth every time it cries, as if a baby never cried from any cause other than hunger! In colicky babies, nursing gives temporary relief, because of the entrance of the warm milk into the stomach; but in the end this practice only adds to the trouble by overworking the digestive apparatus and adding to the preexisting indigestion.

Too rapid nursing causes colic, because the infant then is likely to swallow much air. In like manner, a rubber nipple that has been used for a long time becomes too patulous, and, so, permits too rapid feeding, this, consequently, giving rise to colic.

Many outlandish varieties of food partaken of by the mother, such as onions, beans, and cabbage, affect the nursing baby through the milk and cause colic.

The mental state of the mother has a marked action upon the composition of the milk; worry, anger, and grief in the mother frequently cause colic in the nursing baby.

If menstruation occurs during the period of lactation, the nursing infant is quite likely to be fretful and colicky, and may fail to gain in weight or even lose weight during the menstrual week. Also, if the mother of a nursing baby again becomes pregnant during lactation, the nursing infant is very likely to have a serious digestive upset, with colic as the prominent symptom.

If the abdomen and extremities of an infant are not properly protected against chilling, colic may be the result, through disturbance of circulatory equilibrium.

The Signs of Flatulent Colic of Infants

During an attack of colic, the child cries sharply and persistently, flexing its legs and

thighs, in an endeavor to expel the gas. In male infants, there is retraction of the scrotum, owing to stimulation of the cremasteric reflex. The abdomen is distended, tense and hard; massage usually resulting in the expulsion of considerable quantities of gas through the anus, which relieves the pain and quiets the child.

It is difficult, sometimes, to distinguish the cry of colic from that of hunger, as babies suffering colic pains will usually nurse eagerly, with temporary relief; but the attack soon recurs, and often with greater severity than before. The cry of hunger, it should be observed, is prolonged and continuous, and is not accompanied by the other symptoms mentioned as indicative of colic. The cry of colic, on the other hand, is violent and paroxysmal.

Conditions Liable to Be Mistaken for Colic

There are a number of conditions from which it is necessary to distinguish the flatulent colic of infants.

The first of these misleading conditions, named in chronological order, that is prone to occur after birth, is a peculiar form of *renal colic*. During the latter part of the infant's intrauterine existence, as the result of fetal metabolism, crystals of uric acid and urates are deposited in its kidneys. As soon as the child takes up an independent existence and renal secretory activity starts, these sharp crystals begin to pass down into the pelves of the kidneys and on down the ureters, giving rise to considerable pain and irritation; quite severe traumatism may take place, even to the extent of producing hematuria. The ingestion of plenty of hot water, with perhaps a few drops of spirit of nitrous ether, quickly effects the solution and excretion of the offending crystals, and cures the "colic." If this treatment is not carried out, the attack usually persists for three or four days.

Acute appendicitis occurs in infancy with much greater frequency than generally is believed, and, unless promptly recognized, leads to numerous deaths, which, because of faulty diagnosis, are ascribed to other causes; and this condition, in its early stage in infancy, is particularly liable to be mistaken for flatulent colic.

The pain not infrequently is referred, in the beginning, to the epigastric or umbilical region; but careful palpation will show the point of *greatest tenderness*, and usually of rigidity, to be located in the appendical region. A blood examination will show a more or less pronounced leukocytosis. In appendicitis, a glycerin suppository or an enema does not give the relief that it does in colic, because it does not remove the cause of the pain. Elevation of temperature will usually, although not invariably, be found present in appendicitis, while it is practically never seen in simple flatulent colic. Early diagnosis and prompt surgical treatment are absolutely essential in this condition, as also in the one next to be considered, if these little ones are to be saved.

Intussusception is peculiar to infancy and early childhood. Here, in addition to the colicky pain, bloody stools are nearly always to be seen. In practically all cases, blood, bloody stool, bloody mucus or bloody serum is present. Still, the classical "sausage-shaped tumor" often cannot be palpated through either the rectum or the abdominal wall. However, if the characteristic mass can be made out, and blood passes per rectum, the diagnosis of intussusception is clear, and surgical treatment should be instituted immediately; although, in a few cases, the telescoping may be reduced by distending the bowel with air or water. But, the condition tends to recur; and much valuable time may thus be lost, or the intestine be ruptured, with certain death as the result.

A degree of shock and prostration never observed in colic is present in intussusception. In cases of more than two or three hours' duration, there is always an acceleration of the pulse-rate and an elevation of temperature of from 1.5 to 2 degrees in intussusception, owing to the absorption of some of the decomposed, foul-smelling, bloody rectal contents.

Strangulated hernia gives rise to paroxysmal abdominal pain; but the hernial protrusion always is readily discernible if a careful examination be made.

Intestinal obstruction may result from a variety of causes other than intussusception and strangulated hernia, and will give rise to severe colicky pain; but visible peristalsis, fecal vomiting, obstipation, and "rumbling" preceding the spasms of pain are differential diagnostic signs of importance.

Peritonitis, from whatever cause, may at first simulate colic; but soon fever and the other constitutional signs of septic absorption make the difference clear.

Ptomaine poisoning might be mistaken for colic; but here we can obtain a history of the ingestion of decomposing food. There

are present diarrhea, tenesmus, and marked prostration, with muscular cramps in the extremities. Closely akin to this is acute milk poisoning ("cholera infantum") in bottle-fed infants. Here the extreme prostration, rapid emaciation, and the passage of enormous quantities of serum from the bowel should make the diagnosis clear.

Irritant poisons, especially the arsenical "rough-on-rats" and phosphorus from the heads of matches, occasionally are picked up and eaten by creeping infants in their travels over the floors of the home. The "garlicky" odor of phosphorus on the baby's breath, should make the diagnosis easy.

Sometimes persistent crying is induced by the pricking of a pin; even "safety"-pins have been known to become unfastened and intrude their points into the infant's skin. Exclude this possible cause of pain and crying, and hunger and thirst as well, before making a diagnosis of "colic."

Tuberculous caries of the spinal column often give rise to severe epigastric pain; still, if a *thorough* examination of every persistently crying baby were made, it should not be hard to differentiate this condition from flatulent colic. Furthermore, if treatment is instituted before more than a small degree of spinal curvature has taken place, the results, as a rule, are extremely satisfactory.

Intestinal worms are not as frequently a cause of abdominal pain as is supposed by the laity; nevertheless, it may, when a large number form a tangled mass. The ova of the parasite are readily found by a microscopic examination of the stools; or a vermicide (santonin) may be administered if the presence of ascarides is suspected.

Henoch's purpura is a puzzling source of paroxysmal abdominal pains. Yet, here the cutaneous petechiæ and ecchymoses, together with free hemorrhages from the bowels and mucous membranes, should put the observer on the right track.

Tubercular peritonitis, tubercular involvement of the mesenteric lymph-nodes, and tubercular infiltration of the omentum give rise to severe abdominal pain. However, the abdominal parietes of an infant are so thin that any tubercular nodules should be readily made out by palpation, especially if the child be placed for fifteen or twenty minutes in a bath at a temperature of 105° F. The von Pirquet and the Moro tuberculin reactions are exceedingly simple of application, and are of unquestioned significance in infancy.

Intrathoracic inflammatory conditions, such as pneumonia and diaphragmatic pleurisy, not infrequently are characterized by a pain that is referred to the abdomen. It is the part of wisdom carefully to examine the chest in all instances of severe abdominal pain. The pulse-respiration ratio should be of diagnostic significance in such cases. Frequently such intrathoracic troubles have been diagnosed as "appendicitis," and were operated upon as such.

Foreign bodies swallowed by creeping infants may cause colicky pain. I well remember my surprise, a few years ago, upon examining a Russian baby in North Dakota, when I found its rectum tightly packed with sunflower seeds which the child had swallowed. Recently another baby swallowed three safety pins, all closed and fastened together, the chain having a total length of 3 1-4 inches. As it was, the pins made an uneventful passage through and exit from the baby's interior, except for a mild "colic."

The Treatment of Infantile Colic

The treatment of infantile colic should be, first of all, prophylactic. I believe it is quite customary to say that—it sounds so easy. But many of these cases of "three-months' colic," as the old ladies call them when chronic, are far from being easy to cure. However, if an otherwise healthy infant is furnished with proper nourishment, in proper quantity, and at proper intervals, colic, happily, is likely to be an unknown quantity.

As remarked in discussing the etiology of this troublesome condition, colic occurs more frequently among breast-fed than among the artificially nourished infants; also, that overfeeding is a prolific cause of the trouble. If babies are from the beginning regularly nursed at stated intervals, instead of whenever they cry; and if they are not allowed to nurse longer than fifteen minutes at each "sitting," so that overfeeding is prevented, instead of allowing them to suck and doze, and suck and doze, for an hour at a time; then the troublesome attacks of colic will, in the great majority of babies, be obviated.

If the mother's nipples are but poorly developed, the baby, naturally, will swallow a great deal of air in its attempts at nursing. If that is the case, the mother should be instructed to make systematic efforts to "draw the nipples out." Meanwhile a proper nipple-shield should be provided; and this, by the way, must be as consistently sterilized as is necessary with the rubber bottle nipples.

In bottle-fed infants, the small opening in the rubber nipple, after the latter has been in use for some time, may become too patulous, thus permitting of too rapid feeding, and, so, predisposing to colic. The remedy is obvious.

When undigested curds appear in the stools, indicating an excess of proteid in the food, the remedy is simple in the case of artificially fed children; the proportion of milk in the mixture is to be reduced, while lime-water may be added, to encourage the formation of lighter and more flocculent curds. The addition of sodium citrate to the milk-mixture has a similar effect. When there is an excess of proteids in the mother's milk, her diet must be regulated, the amount of meats and other albuminous foods being reduced; the mother should also exercise freely, and drink considerable quantities of water.

In bottle-fed children, when colic comes from an excess of carbohydrates, as is shown by the thin, green, acid stools, the remedy is quite obvious: reduce the quantity of sugar in the milk mixture. Lactose or maltose, or a mixture of both, with perhaps some dextrin, are the proper carbohydrates to employ; cane-sugar, very rarely, if ever, as few infants can tolerate it before the end of the first year at the earliest. The amount of lactose in mother's milk remains quite constant, and rarely requires modification.

When the proportions of all the constituents of the food seem normal, try reducing the total quantity of food given the baby. Cure constipation, if it exists; a useful remedy is the mixture of rhubarb and soda, 1-2 to 1 dram three times a day. The anti-constipation granule devised by Dr. Waugh also works nicely in many cases.

Treat Any Digestive Trouble

When recurring attacks of colic are the result of chronic intestinal indigestion, treatment must be directed at the underlying disease, the cause being removed, if possible.

If a breast-fed infant is persistently colicky, one should not be too quick to urge that the child be weaned and put upon artificial food. An effort should be made to modify the mother's milk, as heretofore described. Should this not avail, properly modified cows' milk is undoubtedly the best substitute, provided that a pure, clean article can be obtained.

It should be unnecessary, of course, to state that nursing-bottles and nipples must be kept *sweet and clean*, and that special care must be directed to this end during the heated months. Furthermore, a nurser should be employed, the nipple of which fits directly over the neck of the bottle, that is, without the intervention of a "length of garden-hose," as one of my teachers used to put it.

Relieving the Actual Attack

For the treatment of the immediate attack, a number of remedial measures are useful. Hot peppermint-water, or a little brandy and hot water, or soda and hot water, given by mouth, will assist in removing the gas from the stomach. An enema of warm water or a glycerin suppository is most effectual in relieving the bowels of gas.

Hot applications to the abdomen are very soothing. So, also, a flannel cloth wrung quickly from hot water in which has been steeped a mixture [in a bag] of the various household spices, applied to the abdomen and covered with a dry cloth to retain the heat, is efficacious in relieving an attack.

Massage of the abdomen is a useful measure, and gives relief by aiding in the expulsion of intestinal flatus. Moisten the hand with warm oil, and grasp the abdomen with the fingers, in constantly widening circles from the umbilicus outward, finally moving along the course of the colon, to press the gases out in this way.

For the quick relief of the pain, an excellent remedy is the "anodyne for infants" granule, made after the formula of Dr. Waugh. (Nickel bromide, gr. 1-128; codeine sulphate, gr. 1-64; emetine hydrochloride, gr. 1-5000; lithium carbonate, gr. 1-16; oil of anise, gr. 1-128.) One or two granules, dissolved in a teaspoonful of hot water, are to be given every ten to fifteen minutes, to effect.

Many authorities recommend the use of chloral hydrate, and, while its use ordinarily is unnecessary and contraindicated, nevertheless, when there is great pain, with frequent repetition of attacks and almost total loss of sleep, its temporary administration as a palliative measure is justified. From 5 to 7 1-2 grains may be given, in an ounce of warm water, as an enema.

While paregoric has long been popular, in the lay mind, for painful troubles of this character in infants, it is a remedy unwise to employ, and should always be reserved until after simpler measures have been tried and have failed.

Cystoscopy and Ureteral Catheterization

By HARVEY ADAMS MOORE, M. D., Indianapolis, Indiana
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PROMPT and accurate diagnoses are the distinguishing features in the use of the cystoscope and the ureteral catheter. The tremendous importance of an instrument accomplishing such a purpose, applicable to conditions where in the past diagnosis often has been slow and uncertain, need not be urged upon members of the medical profession.

The general adoption of cystoscopy and ureteral catheterization in urological diagnosis cannot be too greatly encouraged, and a few words here in regard to the value of these two methods may not be amiss.

The necessity of diagnosis by the older methods, which depend upon the subjective and objective symptoms in clinical observation, remains for those few instances where cystoscopy is impossible, and this may be due to stricture, urethral tortuosity, susceptibility to hemorrhage, filling of the bladder by neoplasms, very small bladder capacity, or enlarged prostate gland. Putting aside these exceptional cases, I will mention briefly the procedure which I follow in making examinations with the cystoscope and ureteral catheter and the conditions to which they are applicable.

Method of Examination

As a rule, the cystoscope may be introduced with but slight discomfort to the patient. The condition of the bladder is first noted and a close observation made for vesical complications. Particular attention should be paid to the vesical neck, especially in men who exhibit prostatic symptoms, as it is with the careful use of the cystoscope that we can hope to recognize the early symptoms of carcinoma of the prostate. This done, the mucous membrane around the ureteral orifices should be examined and close investigation made of the size and shape of the ureteral openings. The mucous membrane at the lips of the ureters may be more or less prolapsed, or the lips themselves may be pouting or thickened, or the orifice may fail to open and close normally as the urine is emitted.

The character and quantity of the urine and the interval between spurts should be determined. Careful note should be made of any difference that may be apparent between the two sides. From this point, the examination should be carried on with the ureteral catheter, by which separate urines may be obtained for microscopic and chemical examination. Dilatability of the renal pelves and the length of the ureters may be estimated with the ureteral catheters. It is also often important to inject into the kidney some silver salt for x-ray examination.

The Value of the Method

The method here outlined enables diagnosis in kidney affections which the most careful clinical observation can only leave in doubt. Renal tuberculosis, renal and ureteral stone, atrophic kidney, hydronephrosis, pyonephrosis, pyelitis, pyelonephrosis, unilateral nephritis, single kidney, renal hematuria, all present conditions which may be diagnosed correctly by the use of the cystoscope and the ureteral catheter.

Relative to the single kidney and to cases in which one kidney, or both, may be so badly affected as to prevent proper renal elimination, the use of the cystoscope and ureteral catheter must be most emphatically urged. It is a crime, with this instrument at command, to undertake a kidney operation, unless the functional capacity of each kidney is determined.

The older methods of diagnosis may lead to serious entanglements in surgical cases, out of which the patient, if he comes at all, will, at the most, escape only by the narrowest margin, and even then, perhaps, only to suffer. It is necessary that the surgeon, before attempting nephrectomy, know the exact condition of each kidney; otherwise, the operation may leave the patient with a diseased organ to perform renal elimination, and death will result in a short time. The cystoscope and ureteral catheter solve all of these difficulties before the operating-room is reached.

Cystoscopy Prior to Litholopaxy

Before and after litholopaxy the cystoscope is invaulable. Although the stone-searcher may be of great value, it cannot be definite and accurate, as is the more modern

*Read before Randolph County (Indiana) Medical Society.

instrument. The cystoscope will reveal the exact number and size of calculi and the condition in which they exist. After the stones are crushed and washed out, a final examination with the instrument in question will prove whether the bladder is entirely clean, and, if not, will reveal the size of any fragments that may remain. This is of especial importance, as the smallest particles left in the bladder will form the nucleus for more calculi.

Cystoscopy should be resorted to invariably in cases of tumor of the bladder. The subjective and objective symtoms cannot demonstrate the condition satisfactorily in any case, and certainly rarely with sufficient definiteness to warrant operative procedure. By the newer methods, the tumor or tumors may usually be seen, and the location, size, form, and character in detail accurately determined.

It has been asserted by some surgeons that the cystoscope has no value for inspecting prostatic hypertrophy, but the truth of such statements may well be questioned. As a rule, even if not always, the condition of the intravesically hypertrophied prostatic lobes may be observed. Before performing prostatectomy the writer makes it a rule to cystoscope the patient, and he has found that the information gained with the cystoscope has been invaluable whenever prostatectomy was done.

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The Treatment of Rhinophyma

By E. A. FISCHKIN, M. D., Chicago, Illinois

EDITORIAL NOTE.—In the Miscellaneous Department of this number of CLINICAL MEDICINE, *on page 685, you will find a brief clinical report of a very severe case of rhinophyma, with a photograph of the patient. This photograph and description were submitted to Dr. Fischkin, with the request that he tell the "family" something about the treatment of this disfiguring malady—one that is very common and too often goes untreated. Acceding to our request, Dr. Fischkin very kindly prepared the paper which follows.*

THE photograph which you have sent me illustrates very well a case of rhinophyma—a most torturing disease, indeed, and one that, as the doctor aptly says, "is capable of converting an energetic business man into a recluse, for the reason that he wishes to avoid meeting people and hearing whispered remarks that are so constantly made in his hearing."

Although benign in character and of a nature that ought to put no stigma upon the patient, this disfiguring affliction is, nevertheless, a source of great moral suffering to the victim, by reason of its presumptive association with addiction to alcoholics. This very doubtful etiologic factor, so very generally accepted by the public, was assumed even by great authorities, albeit without safe foundation. Thus, the French surgeon Ollier, for instance, ascribes it to overindulgence in the use of red wine, while the Austrian dermatologist, Kaposi, goes even so far as to say that from the color of the nose he could guess in what direction the taste of a patient went as to wine or beer or whisky.

It is unfortunate that so high authorities have laid the foundation for a prejudice so detrimental to the patients; for a rhinophyma does not stigmatize the victim any more than does a lipoma or a fibroma. Indeed, it is a tumor-formation, in all probability a cystadenofibroma (so called by Lassar and by Czerny), and has little to do with indulgence in alcohol. Even acne rosacea, with which this disease is so generally identified, and of which it is claimed to be the terminal, or third, stage, is a very doubtful etiologic factor; for, acne rosacea occurs mostly in women, while rhinophyma is met with in men only.

Microscopically, we find a hyperplastic growth of all the layers of the skin, especially of the sebaceous glands and of the connective tissue, with an associated round-cell infiltration, thus suggesting an inflammatory process; still, we have no clue as to the etiology.

All manner of treatment has been experimented with for the removal of this disfiguring facial condition, including exfoliation, cauterizations by every means, injection of

fibrolysin, x-ray radiation, mercury-vapor ultra-violet rays, radium emanation; also, among purely surgical means: excision and suturing, transplantation, and decortication.

For both the purely dermatological and the purely surgical methods good results have been claimed. The truth lies, probably, here as anywhere else, in the middle. The disease is curable, no doubt, by a variety of methods. But of the best cure we must demand the best cosmetic results; that is, it must remove the disfigurement without leaving any marked alteration in the new-formed skin.

This latter requirement is accomplished only by a combination of surgical and dermatological means. Radiotherapy in small dosage does not suffice, and it is risky if applied in excessive doses. Thermo- and electrocautery leave scars which may prove not less disfiguring than the trouble itself. Ablation of the entire diseased skin of the nose, followed by skin grafting, may possibly restore a shapely nose, but will leave a white, scar-like cuticle deprived of glands and normal vascularity. The best method, therefore, is the socalled decortication of the skin, followed by exfoliation. This I will now describe.

Decortication Is Recommended as the Best Treatment

In undertaking decortication for the cure of rhinophyma, proper preparations for aseptic operation are absolutely essential. The skin of the nose and adjacent parts first of all is effectively cleaned with tincture of soap, followed by alcohol and ether, and disinfected with a 10-percent solution of tincture of iodine. General anesthesia is not necessary; the local infiltration-anesthesia, however, must be perfect and complete.

From a point at the root of the nose, a 1-percent novocaine-suprarenine solution (distilled water, 100 Cc.; novocaine, 1 Gram; sodium chloride, 0.8 Gram; adrenaline chloride solution, 1 : 1000, 10 minims) is injected deep into the subcutaneous tissue toward the base of both sides of each ala and sidewards into the region of the canalis infra-orbitalis on both sides. From a point in the nasolabial folds, the subcutaneous tissue of the upper lip is infiltrated. The deposition of the solution is to be made deep at the back of the nose down to the periosteum. This is necessary, because otherwise the solution may be pressed out again by the dilated pores and thus render the anesthesia illusory.

The nose now is frozen with the ethyl-chloride spray. The freezing must be done from many points at one time. Two assistants hold the ethyl-chloride flasks, and direct the anesthetic sprays upon the nose and adjacent areas, care being taken that the patient do not inhale the vapor, by stuffing the nostrils with cotton, while also covering the eyes and mouth with impermeable tissue. The spraying has to be continued till the nose is frozen in its entire thickness down to the cartilage, this taking about four or five minutes. In this condition, the nose assumes the consistency of a raw potato; and at this stage the novocaine-anesthesia begins to exert its effect.

Now put the index-finger and thumb of your left hand into both nostrils (so as to have control of the thickness of tissue which is to remain) and with the sharp blade of a razor cut off all tumors and shave off the entire thickened skin down to about 1 1-2 to 2 millimeters (not more!) above the cartilage. (The object of these directions is, to leave the fundi of the sebaceous glands as a source of future epidermization. Even in the frozen state these fundi are easily recognizable.) While cutting, the form of the nose is shaped in accordance with its previous contours, this being ascertained, if possible, by means of old photographs. On both sides of the nose semi-circular V-shaped incisions are made, to secure the reappearance of the nasolabial folds.

Now put iodoform-gauze tampons into both nostrils and press the bleeding surface with compresses moistened in the novocaine-adrenaline solution for about ten minutes; which usually stops the hemorrhage. If bleeding be somewhat profuse, use a styptic powder of this composition:

Acidi tannici	1 Gm.
Aluminis	1 Gm.
Colophonii	1 Gm.
Gummi arabici	1 Gm.

After the hemorrhage is controlled, cover the raw surface with a few layers of sterile gauze and fasten this with adhesive plaster. These dressings, as well as the iodoform-gauze tampons from the nostrils, are removed for the first time after three days, by which time epidermization already has begun. The dressing now is moistened with hydrogen-peroxide solution and carefully removed, so as not to rupture the tender new epithelium. If epidermization proceeds slowly, it can be stimulated by painting with tincture of iodine and reapplying the previous dressing for another three days. As a matter of fact, however, formation of the epidermis will be too rapid and it may be necessary to keep it

somewhat down, in order to insure a smooth, even surface. This object is accomplished by applying a weak reducing paste, as follows:

Resorcin	1 Gm.
Ichthyol	1 Gm.
Zinc oxide	4 Gms.
Precipitated sulphur	1 Gm.
Fuller's earth	1 Gm.
Olive oil	2 Gms.
Benzoated lard, enough to make	30 Gms.

The amount of resorcin is varied according to the necessity of reducing epithelization. If the skin be too thick in parts or if parts of the protuberances be not entirely removed, they can be exfoliated by increasing the amount of resorcin up to 50 percent, according to the depth of destructive action desired. In this way a perfectly smooth and normal-appearing new skin can be secured. Of course, the nose will be somewhat larger than normal, on account of the preceding enlargement of all its structures, and the cartilage will also be softer than normal, as is usually the case in old rhinophymas; nevertheless, the patient will be freed from his disfigurement and his olfactory organ be made less conspicuous.

The whole treatment can be done in a period of about two to three weeks, and without laying up the patient.

Milk and Its Care for the Baby

By CHARLES F. LYNCH, M. D., Philadelphia, Pennsylvania

Home Pasteurization

WITH the advent of the hot weather, one of the greatest problems, especially in those cities where there is an imperfect system of milk inspection, which the physician has to face is the proper regulation of the milk supply of the young infants, whose health and happiness depend upon our efforts.

Of course, the ideal milk supply would be a properly safeguarded certified milk; and this form of milk production and the regulations necessary for obtaining the same I shall discuss in a subsequent paper. But comparatively few of our cities thus far have a certified-milk supply, and even in these the cost often is so high as to make the milk prohibitive in those families where it is needed the most—the poor.

In the summer months the raw milk delivered in cities where there is no compulsory enforcement of a sanitary standard frequently contains myriads of bacteria and, hence, is not a safe food for young children—most emphatically not for infants whose food consists entirely of milk. The annual toll of summer-complaint victims is a crying example of the effects of pouring into these little stomachs pure cultures of virulent microorganisms. The infant mortality in any community is usually an excellent guide to the purity of the milk in that district.

How are we to protect these little ones? What can we do? The answer is simple—Pasteurize the milk!

But, you will say, this requires a lot of expensive machinery and we have no power to force the dairyman to go to this added expense.

True enough, pasteurization on a large commercial scale does necessitate considerable outlay for equipment; but for the purpose of protection of the infant we can accomplish remarkable results independent of this outlay, and at a very trifling cost.

Pasteurization of the milk in the home is an entirely feasible operation, and one that can be carried out, at very little cost, by the use of a simple improvised outfit.

The essential aim in the pasteurizing process must be the destruction of all pathogenic bacteria, such as the tubercle bacillus, diphtheria bacillus, and the typhoid organism, and also those organisms which are commonly concerned in the production of the summer diarrheas of infancy, namely, the streptococcus and staphylococcus. It must also be borne in mind that the milk is not to be subjected to such a high temperature as will destroy the natural flavor or inactivate the natural enzymes, thus detrimentally influencing its nutritive value.

Pasteurizing at Home

For the home pasteurization of milk, all the equipment that is necessary is a small tin pail, say an ordinary lard-pail with a perforated false bottom or a small wire bottle-holding rack suspended from the sides of the pail by means of wire loops. Such a rack or bottle-holder can be supplied for ten or fifteen cents at any tinshop; or, a false bottom can be improvised by taking a pie-plate, inverting

this in the pail and punching holes in it so as to allow of the free circulation of the water. The object of this false bottom is to allow the water to circulate freely on all sides of the bottle and also to prevent jarring together or breaking of the bottles.

The milk-bottle, as received from the dealer, is placed into this home pasteurizer. No special bottle is necessary; and the process is best carried on in the original bottle, as it decreases the danger of contamination. After the bottle has been placed in the pasteurizer, fill the pail with cold water and place on the stove, or over a gas-burner, if a gas-stove is used. To regulate the temperature, it is best to have a thermometer that can be placed in the milk-bottle, and to suspend it through an opening in the bottle-cap. This is not essential, however, and quite as good results can be obtained without it, if a little care is used to prevent overheating.

Pasteurization not Sterilization

It must always be remembered, in this connection, that pasteurization and not sterilization is the object aimed at. There is a widespread erroneous conception about pasteurization. Especially among the laity is the opinion prevalent that to pasteurize milk means boiling the milk. This is entirely wrong, and one of the things to guard against is this very overheating or boiling.

If the milk is heated to the boiling-point, then the natural ferments of the product are inhibited or destroyed and the milk becomes unfit for use as a food for infants, thereby giving rise to various digestive disturbances, as well as showing decreased nutritive value. Insist and reinsist that the mother, or whoever is entrusted with the carrying out of the process, understand that she is not to boil the milk. Unless this is done, over fifty per cent of the mothers will boil the milk, and you will arrive at the conclusion that pasteurized milk is not a good food for babies, when in reality you will have been using no pasteurized milk at all, but sterilized milk instead.

The proper method is to bring the water in the pail to the boiling-point; or, if a thermometer is used, heat until the milk is brought above 145°, but not exceeding 150° F. When the water begins to boil, remove the pail from the fire and cover it over loosely with a towel and allow to stand for about thirty minutes. In this way, the milk is held at a high temperature sufficiently long to destroy the major portion of the bacteria present.

Cooling the Milk

Now comes the second, and most important, step in the process, namely, the cooling of the milk. This part is most important, because it is most often neglected. A great many people seem to act upon the theory that once milk is heated to pasteurization-temperature nothing can render it unsafe afterward. But this is entirely wrong. It must be remembered that all the bacteria are not destroyed in this heating process. Those microbes that remain are only too eager to reproduce—and do so very rapidly if given a favorable chance, such as would be afforded by allowing the milk to remain warm.

Thirty minutes after removing the pail from the fire add half-cold water to the pail, and then gradually add cold water until the milk is as cold as it is possible to get it. Have it kept in cold water or, better still, on ice until used. Never allow a bottle of pasteurized milk to stand in the sun or on the kitchen-table, with the cap off, as is commonly the practice in the average home.

In the case of infants, the modified-milk mixture can first be made up and filled into the bottles, having as many bottles as there are to be feedings in the day. It is a wise provision to have one extra bottle, in case one should be broken in the process. Place all the bottles, after they have been filled, in the pasteurizing pail and heat as above described—and remember, do not boil. Allow to stand thirty minutes; cool rapidly, then place on ice. Each bottle, just immediately before use, may be warmed up to lukewarm temperature.

Objections to Sterilized Milk

Many objections have been made to pasteurized milk. It has been maintained that the feeding of milk that has been pasteurized tends to the development of rickets and marasmus. However, it would seem that the weight of clinical evidence does not sustain this claim; and in justice to the helpless infant, who often must depend for his food supply upon a cow a hundred miles away from his home, we should avail ourselves of such a simple method of insuring at least a relative degree of bacterial purity.

The one big precaution is, to avoid overheating and boiling, and to remember to keep the milk cool after pasteurization has been completed.

WHAT OTHERS ARE DOING

VALUE OF AUTOGENIC VACCINES

The greatest service from autogenic vaccines is obtained, according to Drs. T. and G. Scott (*The Lancet*, Sept. 21, 1912) in chronic urethritis following gonorrhea, and in chronic bronchitides, the result of pneumonia.

THE WASSERMANN REACTION IN THE CEREBROSPINAL FLUID OF PARETICS

According to P. Kirchberg, of the insane asylum of Frankfurt a. m. (*Arch. f. Psych.*, No. 3, 1913; through *Muench. Med. Woch.*, No. 16, 1913), in 100 patients afflicted with paralysis [paretic dementia], the Wassermann reaction was positive in 78 percent of specimens of cerebrospinal fluid, and in 93 percent of the blood-tests.

APPENDICITIS IN CHILDREN, AND WORMS

In a review of the subject of appendicitis, appearing in a recent number of the *Allgemeine Medizinische Wochenschrift*, Green points out the striking proportion of the presence of intestinal worms found in children attacked by that disease, this being 30 percent of a total of 60 such patients treated.

BLOOD INJECTIONS, INTRAMUSCULARLY IN ANEMIA

While no rational explanation is offered by the author, J. v. Zubrzycki, of the Universal-Frauenklinic at Vienna, he reports (*Wien. Klin. Wochen.*, 1913, p. 95) having seen considerable benefit resulting from the intragluteal injection of defebrinized human blood for the relief of acute anemia, in six women, consequent upon severe metrorrhagia; improvement coming *pari passu* with the repetition of the treatments.

The fresh blood, drawn from robust healthy pregnant women (inmates of the hospital), was defebrinized and injected, at three- and four-day intervals, in amounts of 20 to 30 Cc. The procedure is simple, painless, and harmless; and no unpleasant effects were observed.

DROP-PERCUSSION: A NEW METHOD

O. Lerch praises (*Deut. Arch. f. Klin. Med.*, No. 1, 1913; through *Muench. Med. Woch.*, No. 16, 1913) a new method of percussion as developed at the pathologic institute of the Augusta Hospital at Berlin. He terms it drop-percussion (*fallpercussion*), the implement being the ordinary plessimeter and plessor; but, instead of striking with the hammer, he allows it to fall, or drop, upon the plessimeter.

The claim is made that, while the art is readily acquired, absolutely accurate anatomical information can be obtained in this way, not to be compared with the present mode, as, for instance, the condition of the thymus in children, of the pericardium, larger vessels, kidneys, etc. The details must be read in the original (lengthy, illustrated) article.

PRIZE OFFER FOR THE CURE OF TYPHOID-CARRIERS

In view of the extreme importance of the problem, a wealthy German citizen (not identified by the Prize Committee) has offered a prize of 10,000 marks to anyone, without reference to nationality, who has developed a method of positively and permanently curing typhoid-carriers within a reasonable period of treatment.

The thesis must be in the hands of the Committee not later than October 1, 1914; and the aspirant must furnish proof that for at least six months subsequent to the treatment no typhoid germs were discoverable in the stools and the urine of the individuals treated by this method. If no fully satisfactory cure should be presented, then the Committe is empowered to award a fractional sum. The verification must be concluded by June 15, 1915.

The Prize Committee consists of Prof. Dr. v. Schjerning, surgeon-general of the Army; Prof. Dr. Ehrlich, Frankfurt; Prof. Dr.

Gaffky, Berlin; Prof. Dr. Hoffman, of the Ministry of War. (*Der Militaer-Arzt*, No. 10, 1913.)

ABORTION AND PROPHYLAXIS OF FURUNCLES

A forming furuncle can be aborted, according to Schuele (*Muench. Med. Woch.*, No. 45, 1912), by the electrocautery, if taken within the first forty-eight hours. The cautery-needle is to be inserted deep in the center of the induration, after having induced anesthesia by infiltrating the surrounding tissue with the obtunder of choice and then injecting vertically and deeply into the center. The small wound resulting is closed, and at the same time drained, by means of twisted wicking.

In cases of furunculosis, the author recommends Haegler's method of prophylaxis by effecting disinfection of the skin-area involved; namely: After epilation, rub well into the skin Crédé's ointment of mercury. Next day clean the cuticle thoroughly, first with the alkaline soap liniment of the German Pharmacopeia, then with absolute alcohol [Would not 70-percent alcohol be better?—ED.]; after which repeat the mercury inunction. It seems that this procedure is to be carried out for two weeks, when ointment of zinc should be substituted for that of mercury.

American physicians have seen so many illustrations of the value of staphylococcus bacterins in the treatment of furunculosis that they are not likely to overlook these powerful agents. In every case where there is a tendency to the occurrence of "crops" the bacterin treatment should be employed. Also, calcium sulphide—don't forget that.

DIAGNOSTIC VALUE OF EMETINE IN DYSENTERY

As every physician knows there are two classical forms of dysentery; (1) the bacillary form, due to infection with the Shiga-Kruse bacillus, or to some closely related organism; (2) the amebic form, must common in tropical and subtropical regions. The first form is usually acute in type and attended with fever; in the amebic form pyrexia is uncommon, except when there is a forming hepatic abscess.

It is interesting to know that, according to Sir Charles Pardey Lukis (*British Medical Journal*, page 1358, June 28, 1913), the hypodermic injection of emetine will clear up the diagnosis. Says Sir Charles: "If you have a case which you suspect to be amebic dysentery, but which does not react to emetine within three days, you may be sure that your diagnosis is wrong, and you need waste no further time in treating it as such. Moreover, the powerful effect of emetine on amebic cases, compared with its uselessness in bacillary cases, may, I think, be taken as strong proof that amebic dysentery is a separate entity."

We recommend a therapeutic trial of emetine in all cases of dysentery, and urge full reports to clear up this point. If Lukis is right this is as valuable an agent diagnostically as it is therapeutically.

EMETINE BY THE MOUTH IN AMEBIC DYSENTERY

Elsewhere in this number of CLINICAL MEDICINE (see page 645), Roemer has given a report of a severe case of amebic dysentery cured by the use of emetine, given by the mouth instead of hypodermatically as advocated by Rogers. That the remedy is effective, even when given orally, Rogers now admits. In an article in *The British Medical Journal* (June 28, 1913, page 1357) Sir Charles P. Lukis says that Rogers "has also shown that one or two 1-3-grain tablets may be given by the mouth on an empty stomach without exciting great nausea, especially if they are keratin coated. This method of administration does not effect a cure as speedily as when the drug is given hypodermatically, but it may be useful when, for any reason, there are difficulties in connection with the giving of the injections."

In the same number of the *British Medical Journal* (page 1369), George C. Law, of the London School of Tropical Medicine, reports a case of relapsing amebic dysentery of ten months' standing, in which 1-2-grain doses of emetine hydrochloride were given in tablet form every evening. It caused no nausea, improvement was noted after the first dose, and by the second day the symptoms had entirely disappeared. Up to the time of writing, states Low, this satisfactory condition had continued. He suggests the use of keratin-coated tablets, as less likely to cause nausea, especially if the patient rests quietly in bed after taking the remedy. However, Roemer's tablets were not keratin-coated and seemed to cause no trouble.

Although Dr. Roemer was not aware of these reports when his paper was written,

he has good supportive evidence of the value of emetine, orally administered, in dysentery.

HYDROCHLORIC ACID IN PERNICIOUS ANEMIA

A. C. Croftan, of Chicago, warmly recommends the use of strong hydrochloric acid in the treatment of pernicious anemia, asserting that it is useless to administer the official dilute acid. It is true he has encountered considerable prejudice, especially on the part of druggists, against giving large doses of the full-strength preparation: however, no harm ever occurs, provided it is taken with meals including enough albuminous food to take care of the acid. From 10 to 15 drops of the full-strength acid is to be taken in plenty of mucilagenous water fifteen minutes after each feeding.

As a matter of course, the dose, greatly diluted, is to be taken through a glass tube, although Dr. Croftan does not mention this specifically; while the buccal cavity afterward should be well rinsed. Caution suggests the addition of a little sodium bicarbonate to the rinsing water, as suggested by A. G. Vogeler in these columns some time ago.

It is worth recalling that certain clinicians hold that the hydrochloric acid should be taken in 5-to-10-drop doses every twenty to thirty minutes during the entire period of meal digestion.

TREATMENT OF TABETIC PAINS

Eugene Dupuy, in a paper read before the French Academy of Medicine (*Gazette des Hôpitaux*, March 27, 1913) says that it is important to avoid as far as possible the use of morphine in the treatment of the pains of locomotor ataxia, and that, when it finally does become necessary to resort to it, the physician should give the hypodermic injections himself, never placing the syringe in the hands of the patient, who only too readily becomes a victim of the morphine-habit. He secured good results in the treatment of patients with exalgin, antipyrin, with cannabis indica in the form of a tincture, and with crystallized aconitine. These remedies, when properly administered, usually suffice, but the remedy *par excellence* for these pains is phosphorus. Sometimes one or two doses of this drug will arrest the painful attack.

In view of the observation of Dr. Dupuy, it appears to us that lecithin might be employed in the course of this disease with good results—not, however, as an anodyne. Who has tried it? and who will report? We shall also be glad to learn of the experience of those who have tried aconitine for the relief of the fugitive pains so characteristic of tabes dorsalis.

ANOTHER TREATMENT FOR TABETIC PAINS

In *The Eclectic Medical Journal* for April, 1913, Dr. T. D. Adlerman recommends the hypodermic injection of apocynum cannabinum in cases of locomotor ataxia. This remedy, he says, "gives prompt and lasting relief to the worst lancinating pains." Before administering the apocynum, it was his custom to direct the patient to take a prolonged warm bath at a temperature of 98° to 102° F., the bath lasting about twenty to twenty-five minutes. It has also been his observation that patients who are receiving the hypodermic treatment with apocynum were benefited by 10-drop doses of stillingia, In some cases, where the patient manifests a slight psychic disturbance, he alternates the stillingia with cerium oxalate, when the restlessness sibsides and sleep returns.

GONORRHEAL WARTS CURED BY BACTERIN TREATMENT

Armstrong (*The Lancet*, May 17, 1913) reports a very interesting case occurring in a man 26 years of age, a portion of whose face was covered with a crop of closely set warty growths. These appeared somewhat like the eruption of acne, but more like molluscum fibrosum. The disease was of eleven months' duration and had not yielded to local applications nor to surgical removal. A careful bacterial examination, made after the production of artificial hyperemia, showed that these peculiar warty growths were of gonorrheal origin.

Accordingly, the patient was given a gonococcus bacterin, beginning with the injection of one million dead bacteria. The result was immediate and remarkable. Within one hour of the injection, the lesion became itchy, irritable, and inflamed. The following day a sort of dry gangrene seemed to set in, many of the warts apparently having become mummified, and these could be rubbed off the face like so much sand.

Armstrong asserts that this effect, with so small a dose, was in itself diagnostic. Larger doses were given at the proper intervals, and five weeks after the commencement of treatment no trace of the disease could be observed.

THE POTATO AND ITS ALKALOID

In *The Universal Medical Record* for May, we find an interesting review of an editorial upon the potato, already published in *The Lancet* and reproduced in the June number of CLINICAL MEDICINE. After making some remarks anent "the judicious diet of potatoes," so pleasingly advocated by the editor of *The Lancet*, as a possible sedative for neuralgia, neuritis, headache, and other troubles, the editor of *The Record* calls attention to the fact that solanum carolinense has had a place in the materia medica of American eclectic practitioners for twenty years or more, and brief reference is made to its possible value in the treatment of "chorea, infantile convulsions, puerperal eclampsia, and epilepsy."

Continuing, the editor then points out that the isolation of this active principle has carried its use a step farther, since not a few American doctors now commend the administration of solanine in epilepsy. The papers by Atkinson, in THE AMERICAN JOURNAL OF CLINICAL MEDICINE, are quoted as evidence that this alkaloid is a perfect cerebral sedative and admirably adapted to long-continued administration, as for instance in epilepsy. The editor of *The Record* suggests that the English practitioner might well investigate the therapeutic efficacy of solanine—an undertaking by the way, that we most urgently advise our brethren on this (as well as on the other side) of the "pond" to follow.

TYPHOID BACTERIN DURING THE INCUBATION PERIOD OF TYPHOID FEVER

Vincent, in a paper presented to the French Academy of Sciences, March 10, 1913 (*Gazette des Hôpitaux*, March 20, 1913), says that, the duration of the incubation of typhoid fever being two or three weeks and that of vaccination 21 days, he arrived at the following conclusions regarding this procedure performed during an epidemic period: (1) the inoculation may be made upon persons already infected and during the incubation stage of the disease; (2) typhoid infection may occur even during the course of the vaccination itself, before immunity has been produced.

In considering these cases, Vincent arrives at the conclusion that generally the first injection of a polyvalent typhoid bacterin produces an immunity sufficient to protect those who are already at the beginning of the incubation period of typhoid fever and those also who would be infected during the three weeks of the incubation period of the inoculation. He says that, since there is no negative phase, there is no danger in vaccinating patients during an epidemic, while, on the other hand, the injection exerts a favorable influence, as shown by the rarity of typhoid attacks among subjects in the incubation stage, and by the benign character of the cases of typhoid fever already in evolution when the injections are made.

AN EPIDEMIC OF TYPHOID FEVER

C. J. Hunt presents (*Journal of Infectious Diseases*, May, 1913) a study of an epidemic of typhoid fever occurring in the borough of Troy, Pennsylvania, in which 229 cases of typhoid fever occurred, 225 of which were primary and four secondary. In other health jurisdictions, 32 other cases were reported.

A very large percentage of these cases occurred between the tenth and thirtieth year of age, indicating, according to Mr. Hunt, that the source of disease transmission was water. As he states, it is an interesting fact that in all water-borne epidemics in Pennsylvania from 60 to 80 percent of the patients have been between 10 or 15 and 30 years of age, while in milk and ice-cream-borne epidemics the predominant age is well below 15 years.

In this epidemic, 17 percent of the persons living in the affected locality were attacked by the disease. In no other epidemic has there occurred so high a relative morbidity. After an examination of the various possible sources of infection, including milk, ice-cream, ice, and the water supply, the evidence seems conclusive that the last-named source was responsible for at least the majority of the cases of typhoid fever.

The water used in the Troy borough was designed to be obtained from a set of springs piped to a common point known as the upper collecting reservoir, at which point was also collected the ground-water from various points in a natural gravel formation. At this source there were six shallow springs and two flowing wells, 100 and 194 feet deep, respectively.

In addition, there were two creek intakes, intended to intercept the ground-waters and deliver them to the upper collecting reservoir; but, intentionally or otherwise, direct communication was made with the creek itself, as was shown by the uranine test.

There was evidence to show the contamination of the water supply by a family, in which there were 4 cases of typhoid fever, not far from the source of supply. While this family lived below the reservoir site, a member of it worked in the harvest-fields tributary to the water-shed draining into the municipal reservoir. An examination of the water showed large quantities of bacilli coli.

Having determined upon the source of infection, Mr. H. E. Moses, engineer of the state department of health was called in. The water in the two reservoirs supplying the borough was first treated with copper sulphate, later, a temporary plant being installed, to treat the water with hypochlorite of calcium. The street-mains were flushed, all dead ends and taps being opened, until the water showed the presence of the hypochlorite at all points. This measure, with the others employed, seemed to be effective.

In addition, 761 persons, or 56.6 percent of the total population exposed to infection, were treated with prophylactic antityphoid vaccination. Among those vaccinated, 37, or 4.6 percent, developed typhoid fever, while among 582 not vaccinated, 65, or 11.16 percent, developed the disease.

Mr. Hunt says that the chemical treatment of the water has been continued since that time, without the occurrence of any new cases.

STREPTOCOCCI AS AN ETIOLOGIC FACTOR IN CHRONIC ARTHRITIS

D. W. C. Jones contributes a paper to *The British Medical Journal*, May 17, 1913, which deals with the bacteriologic diagnosis of arthritis, based upon the results following the therapeutic use of a streptococcic bacterin. He has treated twenty consecutive arthritic patients in private practice, in all of which cases a tentative clinical diagnosis of streptococcic infection was made, and a streptococcus bacterin made from the organisms derived from different sources was administered.

Jones reports these cases in detail, and his conclusion is, that, if therapeutic results can be accepted as a basis of bacteriologic diagnosis, then eight out of these twenty cases give strong evidence that the arthritis was due to infection by streptococci, chiefly derived from some part of the alimentary canal. In all of these eight cases there was more or less improvement. In but few, however, was this improvement very marked, although in case 9 the bacterin treatment produced very striking results and apparently complete cure at the end of three months.

SOME USES FOR LOBELINE

Pigeaud, in *La Dosimétrie*, says that the alkaloid lobeline exerts its action principally upon the respiratory center. Before he became acquainted with this drug, he used the tincture of lobelia with good results, but since having adopted the alkaloid he finds that he gets better results. He uses this drug in granule form exclusively. He asserts that lobeline is more effective in spasmodic conditions than morphine, providing the doses are repeated sufficiently often.

Sigmund has employed lobeline with success in the treatment of spasmodic cough, giving the drug, during the violent attacks, every quarter of an hour. While it is evident that morphine will quiet a patient more rapidly than lobeline, the very fact that the former may not be repeated, except after a considerable interval, makes it to that extent less efficacious than the granules of lobeline, which may be given at short intervals.

In this connection Pigeaud reports a very interesting case of asthma. The patient had suffered from daily attacks for a number of years. The treatment previously given, including hypodermics of morphine, had proved imperfectly palliative only. The morphine alone would control the attacks, but they returned just as violently as ever after the narcotic's action had disappeared. When Dr. Pigeaud saw the patient at his first visit, about 10 o'clock in the evening, he presented the symptoms of suffocation and the characteristic distress in a very marked degree. The attack had begun more than an hour before the doctor arrived.

He began immediately to administer lobeline in 0.5-mgm. doses every quarter of an hour. At the fifth dose the paroxysm ceased. The remedy was continued during the next day in this fashion: One mgm. every two hours. The following day the attack came on at the usual hour, but much less violently than before, and was almost completely brought under control by 2-mgm. doses given every quarter of an hour. The lobeline was continued for another day, and the succeeding night the attack failed to appear. The

patient was so captivated with the efficaciousness of this treatment that he asked to be given some of the granules, so he need not wait the physician's attendance should renewed attacks threaten.

For catarrhal and cardiac asthma, emphysema, and other conditions, in which an antispasmodic is indicated, Pigeaud recommends the associated use of hyoscyamine, lobeline and strychnine arsenate. These are given in small doses, ordinarily every fifteen minutes in acute attacks, and at longer intervals in chronic forms. Thus administered, this combination gives excellent results, and particularly, he says, in the treatment of whooping-cough and asthmatic paroxysms.

TREATMENT OF INFANTILE DIARRHEA

Just now, the summer diarrheas of childhood are of special interest. Radue, in his "Diseases of Children," gives the following simple directions for the treatment of the usual forms of diarrhea occurring in children. Even cholera infantum, he says, may be managed along the same general lines as described below:

"First of all stop all food. Give 1-6 of a grain [or 1-10 grain, with aromatics.—ED.] of calomel every hour for six to eight doses; or, if you desire, administer a good dose of castor oil to clear out the intestinal tract. Give small quantities of cool water frequently in which the white of an egg is beaten. For fever, if present, give aconitine. For a child of two years give 1-2 grain of zinc sulphocarbolate every hour in solution, or you may dissolve two zinc and codeine compound tablets in 24 teaspoonfuls of water, and give a teaspoonful every hour until relieved, then give it less often as the case requires. If there is collapse, put two granules of 1-250 grain, a grain of atropine into 24 teaspoonfuls of water, and give a teaspoonful every hour until reaction occurs, then reduce. Add strychnine in small doses for tonic effect, In some cases copper arsenite, 1-1000 of a grain in solution every 15 minutes until effect, acts most wonderfully.

"Above all keep the bowels clear with saline laxative or calomel, and push the sulphocarbolates with strychnine. Give codeine for pain, and success will be assured. Of course, if complications occur, as they surely will in some cases, you must treat accordingly; and you will have to resort to astringent enemas and colonic flushings with a solution of zinc sulphocarbolate, or silver nitrate, one grain to the ounce of warm or cold water, whichever you may desire. For dysentery, give small repeated doses of saline laxative, and you may give small repeated doses of acetate of lead, tannic or gallic acid, hydrastinine, and ergot. Castor oil is also of good service."

KEEPING COOL ON HOT NIGHTS

How to procure restful and refreshing sleep on oppressively hot summer nights is a problem concerning everybody, not alone the ailing and the seriously sick, but all of us who would maintain good health; and the family doctor is the one to advise the people—entirely aside from the personal aspect of himself keeping in working trim. Hence the following suggestions, contributed by Dr. A. L. Aston to *The Chicago American* seems worthy of wider currency, and some of our readers may wish to give the method a trial and report upon it. Needless to say that the mode of constructing the canopy is a matter of detail, to be varied according to circumstances. Dr. Aston's letter follows:

"The pitiful condition of the people in the torrid heat-waves has impelled me to write you my experience in getting a good night's rest no matter how hot the weather, and also a panacea for feverish patients, especially those afflicted with typhoid fever. This is my method as I have employed it in my practice of medicine as well as for my own benefit:

"I pass a wire or rope tightly around the top of the head-piece of the bed and another about the top of the foot-end. Then I fasten similar strings to the loops thus formed, one on each side of the bed, and draw them tight, so that they run lengthwise overhead from head to foot, while still other strands are run diagonally between the two lateral guys. This forms a support as for a fly-canopy.

"Now take a large sheet and wet it thoroughly, but not soaking-wet, and hang it over the wire frame, enclosing the bed. Have all the windows and doors open for plenty of draft. Everything ready, no matter how hot and stifling it may be, a person can crawl into this tent-bed and sleep soundly generally until nearly morning. If now the sheet is dampened again, it will last until daylight, when the sleeper will awaken refreshed and strong to meet the heat and business of the day.

"In case of fever, it is better than the fatigue of putting the patient into a bathtub, the quieting effects are strengthening, and it will allay fever more quickly than any other method ever tried."

MISCELLANEOUS ARTICLES

Closing Exercises of the Army Medical School, Washington, D. C.

THE closing exercises of the United States Army Medical School at Washington, session of 1912 to 1913, took place on May 31. Through the courtesy of Dr. Richard Slee, of Swiftwater, Pennsylvania, a member of the editorial staff of CLINICAL MEDICINE, who was present, we are enabled to give the following report of the addresses delivered on that occasion.

Opening Remarks by Colonel Charles Richard, Commandant

This day's exercises closes the 17th session of the Army Medical School, which was established in 1893 by Brigadier-General George M. Sternberg, at that time Surgeon-General of the army. General Sternberg, who honors us with his presence here this morning, fully appreciated the necessity of establishing a course of training and instruction for young physicians entering the army. The wisdom of his policy has been fully demonstrated by the results obtained, which have been of benefit not only to the medical corps, but to the army at large and to the medical profession of the country.

It has been the custom, ever since the establishment of this School, to request some distinguished member of the medical profession to deliver an address to the graduating class at these exercises. The selection this year has been a particularly happy one, in that Dr. Charles W. Richardson, who is a resident of Washington, and a member of the Medical Reserve Corps of the army, has been selected for this duty. I take pleasure in introducing Dr. Charles W. Richardson.

Dr. Richardson's Address

When I was requested by the Surgeon-General of the army to address you this day upon your graduation from the Army Medical School, I felt somewhat disturbed over the obligation I was to assume, although appreciating greatly the honor his request brought to me. Appreciating the fact that it behooves the soldier to accept with alacrity and pleasure the request of his superior officer, I accepted the call at once—however unqualified I seemed—and, in the same line of duty you, as good soldiers, must listen to me throughout my address, however much you may wish to flee from action.

You gentlemen, after your graduation from the best of American schools, have, through your individual efforts, shown your efficiency to so great a degree, as to be accepted, through examination, for the medical service of the U. S. Army. In former days, before the establishment of the Army Medical School, it was customary, after the aspirants had demonstrated their general knowledge and medical skill to the satisfaction of the examining board, to accept them into the service without any previous military training and hie them hence to some near or distant military post, to learn, as well as they might, the difference between military and civil practice, as well as those obligations which they had assumed with regard to the sanitation and hygiene of large bodies of men in barracks or in the field.

Through the establishment of this magnificent school, with its admirable corps of teachers, with its laboratories and practical apparatus for teaching military medicine, a practical postgraduate course for specializing in military surgery, you, gentlemen, upon your graduation today, go forth fully equipped to assume any obligation you may be called upon to meet. Coming, as you do, from various cities in more or less distant parts of our great country, you have been brought to this, your capital city, to undergo your preliminary service in the army.

How well-ordained your first year of service has been! Could one imagine a better preliminary habitat, a more delightful environment for one to make his initial preparation for his actual calling in life? Although you have been especially occupied in your duties in connection with your postgraduate

work, the fact has not, probably, escaped your attention that here, in your capital city, there is a vast storehouse of scientific material, data, and facts which is constantly attracting the scientific worker along avenues of thought and action. All the departments of the federal government have, as necessary adjuncts to the performance of their designated functions, various bureaus and laboratories of research, all of which have attracted men of genius and scientific attainment.

Those various bureaus and laboratories, all under the charge of experts, furnish inviting fields for those of scientific inclination who wish to follow out research along any particular line in science which may interest them individually. Helping hands and directing minds are ever ready and willing to aid. In your chosen profession, for example, we have the army medical library and museum and the various laboratories associated with them, also the admirable clinical facilities offered by the Walter Reed Hospital. Therefore, viewing our capital city from its educational aspect, it might be termed a great postgraduate university without administration or a prescribed curriculum.

Education, the acquisition of knowledge, has been the quest of man since the dawn of light. There is no question that the best method by which to obtain an education has been a source of controversy as far back as the light of history leads. It seemed for many years, especially in this land, that the course of education along prescribed lines had a certain foundation, which was regularly planned, and closely followed from the primary school, through the graded school, into the high school, and from thence to the departments of arts and sciences of the university.

During the past quarter of a century, many fads and fancies have crept into the educational system, which have resulted in lessening the time necessary for the proper elucidation of elemental work along the fundamentals of primary education. From a physiological standpoint, we find that the tendency of the age is to develop precocity in children by reducing the age of beginning attendancy. Facilities are offered, throughout the various advanced educational systems, to the schooling and confining of children at too early a period in their development. It is a well-known physiological fact that the child's brain is undergoing its most rapid development during the first seven years of its life. The cerebral convolutions are deepening and the grey cells are increasing in number, and maturing.

All efforts to stimulate unduly cell activity during this period of child-life should be avoided as far as possible. The tendency therefore, to place children in primary schools at too tender an age, because being detrimental to their physical and mental welfare, should be avoided as far as possible by boards of education. The results of the violation of this well-known physiological fact is too often patent to the practitioner of medicine and frequently to the sorrow of well-meaning but misguided parents. The physical and mental development of children, other things being equal, is best conserved when they are not placed in the line of serious educational work until after they have passed the sixth year of life.

While probably it is true that we are all born equal, it is nevertheless more of a fact that this equality ceases with the first act of cerebration. Throughout the course of life the mental activity, the capability of acquiring knowledge, and the limitations of this power, differ greatly in children -therefore the necessity, if it were possible in our complex system of education, to separate the children in their educational progress into smaller groups and to meet the requirements as to advancement according to the averages of the various groups.

In the collegiate departments of many of the universities, there has been an effort during this period to meet the requiremrnts of the individual or groups of students by the adoption of the socalled elective system of study. In some of the universities, the tendency to the elective system has extended so far as to make it as undesirable here, in its extreme liberality, as would be a more discriminating course desirable in the public school system. Indeed, the movement of radical tendencies shown by some of our universities along this line has been too rapid, some of them permitting the immature student practically to elect the greater portion of his curriculum. The universities have seemed to vie with one another in making as short a course as possible; to the goal which the student wished to attain; the major requirements have been reduced to the minimum, so as to permit the student to have the greatest possible lattiude in the course he wishes to pursue.

The effect of such extreme latitude cannot but result in numerous errors on the part of the student, and, if pursued, needs must be productive of a narrow and superficially pre-

pared graduate. The conservative action in recent years pursued by the strongest of our older educational institutions will, no no doubt, readjust the system along more practical and satisfactory lines.

A few years ago, I heard an address by one of our distinguished university presidents, in which he questioned seriously whether the elective system in university education had not progressed too far, and whether it did not require a thorough readjustment.

In some of the scientific departments of the universities, there also has been some tendency to permit of the elective work during the regular course, for the purpose of permitting of specialization along some particular line. In a few of the medical schools, there deeloped a tenvdency to shape the course of the undergraduate in medicine, if he wished, in such a way that he would be prepared during his undergraduate course for some particular line of special work. From the fact that all specialties in this discipline demand a thorough knowledge of general medicine, and further, because many local pathologic changes are dependent upon disturbed innervation of the general system, there is no possibility of the elective system thriving in the undergraduate medical course.

In medicine, there is no short course to attain desired ends. The progress through the medical school must have but one fixed purpose in the preparation of the undergraduate, and that is the creation of a well-rounded medical graduate. The product must be be as broad and as well trained as the course and facilities of the institute will permit.

Thanks to the standardization of methods of medical education and the requirements of the state boards of medical examiners, there is now practically no possibility for any system of elective study creeping into the domain of medicine. The tendency of specialization is to narrow one's view of medicine, and it is only through persistent effort that the worker in a special field of medicine can maintain his perspective of general medicine—even though he has spent some years in general medical practice before devoting himself to his specialty. How narrow, necessarily beyond the power to overcome, would be one who begins his work along a special line while still in his undergraduate course!

The wonderful progress in the science of medicine during the past quarter of a century not only has caused a complete revolution in the practice of medicine, but has also been the cause of a similar revolution in teaching it.

The independent medical school has almost ceased to exist. Many of the weaker schools have dropped out of existence. Others, through combining—and thus increasing their teaching staffs, financial resources and clinical facilities—are better prepared to meet the present advanced rquirements of medical education. One of the oldest universities in the land—Dartmouth—has just announced its intention to close its medical department to graduates, on account of its inability to meet the modern demands of medical education, its clinical facilities being inadequate.

It seems as though the medical schools of this country, in the new requirements of matriculates, in the creation of a greater number of full-time chairs, and in the increasing of the clinical over the didactic teaching, were anticipating the demands of the pessimistic report of a distinguished educator on the subject of a medical education in the United States.

This advancement and progress in medical education has not been the result of a demand from without the profession, but has risen as a result of the evolution of the science of medicine, and from the desire of the profession, from its broad altruistic and humanitarian principles, to send out each succeeding year a better-equipped corps of medical graduates, men better prepared to meet the ever-increasing demands and requirements of the public.

With the progress of the science of medicine, the tendency to specialize along various lines and fields of medical endeavor made itself manifest. For many years the practitioner, from natural inclination or from attractiveness of study, drifted into certain special lines of practice or study, often perfecting himself by years spent with some master in his chosen field.

At a later period, we have the development of the postgraduate medical school, more or less perfectly conducted, with or without proper clinical facilities, and which may or may not fully prepare the practitioner for his special field. Such schools are not under university control, and do not possess the power of conferring a degree. This method of teaching the specialties has not been fruitful of general good results.

The profession has been in a state of unrest for many years because of the inadequate methods of educating qualified practitioners along the lines of special practice. This unrest, again, is working in the profession for the humanitarian purpose of protecting the public from imperfectly prepared

men. During the past few years several of the special national medical societies have had this important theme under consideration, and papers bearing upon this subject have been read and discussed.

Last year, in one of these societies, a commission, of which I had the honor to be a member, was appointed to investigate the subject exhaustively, obtain reports from all the teachers along their particular lines in the medical schools of Canada and the United United States relative to this subject, and report their action before the meeting of the society in Washington during the first week in May, 1913.

The essential features of that report were, that there existed the necessity of ascertaining the qualification of the matriculate for the special line of study which he desired to pursue; the necessity for lengthening the time required in the various courses in the postgraduates schools; that postgraduate teaching should be under university control; and that after an adequate examination, if full qualification be shown, the student should be granted a diploma.

The same spirit along another line was crystallized at the same time in the actual formation of the College of Surgeons of the United States, which has for its object the standardization in this country of the art of surgery, and is founded upon the same standards and ideals in surgery as the Royal College of Surgeons of Great Britain.

The profession, as it has raised its standards of medical education in the undergraduate department, will, within the near future, shape out most thoroughly the methods pertaining to the conduct of postgraduate study and the administrative plan through which the various courses are to be pursued in the postgraduate schools. Such a postgraduate school as you found prepared for you here, of which you had the advantage, and from which you now go forth with knowledge of military surgery, in a similar type is the great desire of many teachers of medicine to see established for the teaching of special subjects to civilian practitioners.

Employed, as you have been, during the past few years in your acquisition of a knowledge of medicine, you have not, probably, taken much interest in the history of medicine and of how, down through the centuries, the art of medicine passed without getting beyond highly trained observation and the conception of disease as a process of nature. Our early teachers, Hippocrates and Galen, had no higher conception of medicine, although Galen did perceive that experimentation and the collection of data, from which principles and laws could be derived, were essential for a scientific basis for medicine.

For many centuries during the period of medievalism, the teachings of the past seemed to have been lost; only the flickering lights in monasteries here and there kept the flame alive until the birth of the period of the Renaissance.

With the revival of learning, the questioning of the observations that had been handed down through the ages became more general, and enquiring minds became bold enough to investigate. The inquirers began to investigate, and then to experiment, and thus we have the birth of modern science.

It would be far beyond the limits of this address to trace the progress of medicine through the centuries from the revival of learning to the present vast strides in medical progress, but it is my desire to direct your attention to one medical name that stands out during this generation—to pay a tribute to one who by his life-endeavor brought hope, joy, and life to countless thousands of homes. His genius should act as a guiding star to your efforts.

In Morton, we have the genius who risked reputation and even life in a series of experiments that proved to the world that the knife could be robbed of its pain and the terror of the operating-room be banished. In Lister, we have the genius that, accepting the teaching of Louis Pasteur, gave us antiseptic surgery. In Major Reed, we have the brilliant and courageous mind that made the building of the Panama Canal a physical possibility; and in that quiet, unassuming practitioner, Joseph O'Dwyer, we have that intrepid, diligent and exact mind that gave to the world the most wonderfully perfected mechanical device for the relief of dreadest agony and the saving of child-life that the world has yet known.

In 1885, there was given to the world a new mechanical device for combating one of the most distressing and life-destroying complications of a most fatal malady. I refer to the method of intubation for the relief of laryngeal diphtheria. Previous to the introduction of intubation, the only relief that could be afforded to the little sufferers from impending suffocation in croup was through the performance of the operation known as tracheotomy.

The mortality from tracheotomy, as done upon the children in the New York Foundling Assylum, caused one of the attending

physicians at the institution to long for a simpler, safer and more certain method of relief. Dr. Joseph O'Dwyer thought long and seriously over the project, and, after a period of painstaking thought, hard work and tedious experimentations, he at last perfected a set of tubes, one of which could be placed, through the mouth, into the larynx and trachea, and there permitted to abide for a period of time until the disease had been arrested, when the tube could be removed without fear of a recurrence of the obstruction to the breathing. These tubes were so perfectly formed, so admirably adjusted, and so exquisitely fashioned to the purpose for which they were intended, that when so perfected and placed before the profession they were a finished article.

The last word, so far as those instruments were concerned, was said when they passed from the inventor's hands into the possession of the profession. Joseph O'Dwyer, like many of the great laborers in human endeavor, was a thoughtful, earnest worker, not given to express himself to great length in words, and only after years spent in diligent work and research developed the latent genius that he possessed.

For five years O'Dwyer dreamed, thought, and spent many of his hours in perfecting the tubes, measuring infants' larynxes, as to average sizes and shapes, and in so shaping the tubes that they would present a collar here that would prevent them from slipping into the trachea, and a swelling there to prevent them from being coughed out. The tubes were so made as not to produce undue pressure at any point when properly adjusted and, yet, so fashioned as not to be automatically expelled. Experiments made after the tubes had been fashioned, to a certain degree surreptitiously, to discover whether the tubes would be tolerated by the human larynx and would there abide without causing injury, must have been a period of fear and anxiety to this noble-hearted seeker after knowledge.

How keenly he followed the path of a discriminating scientific laborer, was demonstrated through all his efforts in the perfecting of his tubes; but still greater was this evidenced in his preparation for its final announcement to the profession. Although having a perfect instrument with which he had demonstrated its successful working in the public wards of the Foundling Asylum, and although the profession was clamoring for its proclamation, O'Dwyer was not willing to do so until its merits had been demonstrated under the trying ordeal of private professional work. After several successful issues on cases intubated in private practice, he then placed his invention in the hands of his professional brethren, without other reward than the plaudits of his colleagues and the knowledge of a noble, humanitarian work well done. So keen was he in his desire to spread the knowledge of his work, that he gave his time, so that others might be ininstructed without remuneration.

As evidencing this desire on his part, was his friendly reply to my letter requesting when and how I could best obtain the experience requisite to make use safely of his tubes. At his invitation, I immediately went over to New York, and was by him escorted to the room in the cellar of the Foundling Asylum, where he had conducted most of his experimental work, and there, with material furnished by him and through his own personal instruction, I was prepared for the work. Having expressed his satisfaction at the skill his pupil exhibited, we were about to part, when I asked him how I was to recompense him for his time. His answer was, "It has been a pleasure to instruct you. If you wish, you may send a small token in the form of a book to the interne who has gotten together the material for us."

Devotion to his art, infinite courtesy and kindness, self-abnegation and almost painful modesty were characteristics of Joseph O'Dwyer. It is noteworthy that the tubes so perfected by Joseph O'Dwyer have never been improved. Throughout the world this method of saving children threatened with suffocation rapidly spread, and was immediately adopted. In the New York Medical Society, at the Washington session of the International Congress of Medicine, and elsewhere, O'Dwyer received the thanks, congratulations, and the ovation of the profession. Countless thousands of children owe their lives and relief from suffering to this great master.

Joseph O'Dwyer, at the time when he perfected the method of intubation, was a very successful practitioner, but the demands of his creation caused him to relinquish his general practice. Soon, however, the increase in the number of skilled intubators and then the advent of antitoxin caused a rapid loss of revenue from his special practice. Prematurely old, lacking in financial means almost akin to want, we witness this great man pass to his maker at the early age of fifty-seven years—leaving so little of worldly possessions that loving and admiring friends in the profession provided for the education of his four motherless sons.

Such in brief is the history of one of the greatest mechanical additions to modern medicine, one of the most perfectly and immediately successful instruments ever invented by human agency for the relief of human suffering. Such is the history of that patient, kindly, God-fearing, diffident man, Joseph O'Dwyer, who gave of his all, that, through his effort, human life might be redeemed.

The careers of Morton, Long, Helmholtz, Pasteur, Lister, Sims, McDowell, Beaumont, Behring, Ross, Reed, Carroll, O'Dwyer, and of countless other modern workers along the pathway of scientific medicine demonstrate that the great truths of medicine, the great sanitary discoveries, the great biologic and laboratory findings, and the remarkable achievements in invention of instruments of precision in diagnosis, surgery, and therapeutics are usually worked out, achieved, discovered, and invented by men of scientific attainment after most thorough preliminary training, through diligent effort and research; and when at last the results are proved to the satisfaction of their immediate colleagues and themselves, the fact is announced to and for the benefit of their colleagues throughout the world and by them dedicated for the welfare and to the good of humanity.

Standing now, as you do, at the threshold of your active professional career, you must be optimistic as to the future of medicine and the possibilities it offers you for signal achievements in laboratory research, improvements in sanitation, progress in preventive medicine and possibilities in the discovery and invention of mechanical devices as aids to diagnostic and therapeutic results. Great as has been the progress of scientific medicine during the past thirty years, greater will be that progress amid the days that now open before you, and our hopes and wishes are, that through your efforts and endeavors you may be large participants in this activity and material, if not signal, aids in the future progress and glory of medicine.

Introduction of the Assistant Secretary of War

In introducing the Assistant Secretary of War, Colonel Richard said:

The Secretary of War expected to be with us this morning, to present the diplomas to the successful members of the class, but he found it impossible to do so. He is ably represented, however, by the Assistant Secretary of War. I need hardly tell you how much we appreciate the interest he has shown in the school by coming here today. I take pleasure in presenting him, the Honorable Henry S. Breckenbridge.

The Assistant Secretary of War spoke as follows:

"Before proceeding with the presentation of these diplomas, I merely wish to make two remarks, and the first is to express to you gentlemen, the regret of the Secretary of War for his inability to be here; and the second is to express my own profound appreciation of the privilege to be here and present these diplomas to the men who here consecrate themselves to follow in the trail so gloriously blazed by Walter Reed and his coworkers."

With a hearty handshake, and with congratulation which, it was evident to see, were genuine, the Assistant Secretary then handed each graduate officer his most highly prized diploma.

Colonel Richard Introduces General Sternberg

Early in the present session of the school, Dr. Richard Slee, of Swiftwater, Pennsylvania, a member of the Medical Reserve Corps of the Army, generously provided for the annual awarding of a gold medal in honor of Brigadier-General George M. Sternberg, the founder of this school, who had been Dr. Slee's instructor in bacteriology. This medal is to be given to the graduate officer with the best term-record in practical knowledge of the subjects of bacteriology and serum-therapy. It is to be known as the Sternberg Medal. It is especially fitting that General Sternberg should present the first of the Sternberg medals to the successful graduate. I have the honor to present General Sternberg.

General Sternberg's Address

Lieut. George B. Callender: It gives me great pleasure to present to you the first Sternberg medal, which is awarded to you by the faculty of the Army Medical School for your proficiency in bacteriology and serum-therapy. I highly appreciate the privilege of presenting this medal, which has been provided and named by Dr. Richard Slee, who studied bacteriology under my direction in the Hoagland Laboratory, Brooklyn, N. Y., more than twenty-five years ago.

My own bacteriological studies commenced at a time when, so far as I know, no one in this conutry had made any serious researches in this field of investigation, and the majority of the profession regarded this class of micro-organisms as of no importance from a pathological point of view. It is unnecessary to point out to you the successive steps in the

development of our knowledge since that time, and the great value, especially to preventive medicine, of the facts which have been brought to light by a host of earnest students in the bacteriological laboratories in all parts of the civilized world.

It is a matter of gratification to me to know that here, in the Army Medical School, this branch of medical science is given special attention, and that in future those who come here to prepare themselves for the varied and responsible duties of medical officers of the army will have a special incentive to excel in bacteriology.

GEN. GEORGE M. STERNBERG

At the same time, I desire to impress upon you the fact that no expert knowledge in any one branch of medical science will justify a neglect of that practical knowledge of medicine and surgery, and that preparation for active field-service which it is essential that every medical officer should possess.

You cannot give too much attention to questions relating to the prevention of disease among those whose sanitary interests are committed to your care. But, while the studies you have pursued at the Army Medical School are designed especially to prepare you for these responsible duties, you must not forget that the interests of the sick and the wounded of our army are in your hands, and that these interests and your reputations will depend upon your professional knowledge and skill.

It is a matter of great satisfaction to me that the Army Medical School, which I established twenty years ago, has served so useful a purpose and is at present in such a satisfactory condition. Several of its earlier graduates now belong to the faculty of the school.

We can point with pride to the achievements of many of those who have received its diplomas, and we confidently anticipate that you, Dr. Callender, and other members of your class will do some notable things in the interest of scientific medicine, and for the reputation of the Medical Corps of the army.

In closing my brief remarks, I desire to express to Dr. Richard Slee my high appreciation of the honor he has done me by giving this medal my name. It is now fifty-two years since I received my commission as a medical officer of the army, and when I consider the great progress which has been made in medical science and in the facilities for acquiring a sound medical education since that date, I feel that you are entering upon your career of active service with greatly superior advantages, and that we may justly look to you for superior achievements. I congratulate you upon being the first graduate of the Army Medical School to receive the Sternberg medal, which I now present to you.

Colonel Richard Introduces Colonel Hoff

"In 1897, Colonel John Van Rensselear Hoff, of the Medical Corps of the Army, generously provided for the annual awarding of a gold medal as a memorial to his father, who had been a distinguished officer of the Medical Department of the army, to the graduate who had maintained the best average standing in his class. Fortunately, Colonel Hoff is able to be present on this occasion to present the medal in person.

I take pleasure in presenting Colonel Hoff."

Colonel Hoff's Remarks

Lieutenant Warriner: In presenting to you this medal, a memorial to my father, which you have won by your scholarship, I congratulate you; firstly, upon the preeminent standing you attained in your class—no small acomplishment; and secondly, that you are about to become a member of a Corps of distinguished lineage and brilliant prospects. Upon you and your fellows will depend, largely, how far such prospects shall become realizations.

Colonel Hoff then presented the medal, and after hesitating a moment said:

"May I give you a word of advice? Look well to the signs of the times and heed them. Everywhere there are wars and rumors of wars, and we cannot hope to escape conflict, sooner or later; nor, under certain circumstances, should we wish to.

"Our country is ill-prepared for war, and it is one of your highest duties, within your sphere, to see that your department shall not fail because of lack of preparation when the day of trial comes, as it will surely will."

THE PRIZE CONTEST

In June, as you will doubtless remember, we had a brief editorial in which we offered some prizes for the best short articles upon summer-time ailments. We have received a number of little articles, and some of these follow directly after this brief announcement. Other and longer articles upon the same general theme will be found elsewhere in this issue.

Now—who shall have the prizes? We might award these ourselves, but possibly we might show some bias. We do not want to do that, and therefore we come to the "family" for advice. Will not every reader signify (post-card will answer) what articles he thinks of most practical help? Please attend to this at once and please us greatly.

We want to keep up these symposia. *We* think them mighty interesting. In the September number let us discuss *asthma*. Prizes will be awarded for the most helpful short articles—200 to 500 words by preference. We want to hear from as many as possible.

ERYSIPELAS—A THERAPEUTIC NOTE

As I have received so much help from some of the experiences of those writing for your journal, I want to suggest to the brothers that in their next cases of erysipelas they try the following applications.

Thoroughly wet the affected area with pure apple-vinegar, then immediately sprinkle over with sifted prepared chalk. You will get wonderful results from two or three applications. Of course, aconitine for the fever and calcium sulphide to saturation is understood. Try this, but be sure to use nothing but pure apple-vinegar, and you will be surprised at its quick action. Success to our journal.

J. A. NELMS.

Stockbridge, Ga.

[Don't forget the value of pilocarpine in sthenic erysipelas; it often works like a charm. However, the doctor's suggestions are excellent, although in *my* next case I am going to paint the affected area with tincture of iodine and, after drying, apply flexible collodion to exclude the air. Often results which are simply marvelous follow the use of streptococcus bacterin in some cases of erysipelas. This is an emergency remedy useful in many severe acute blood infections, and every doctor should have it on hand.—Ed.]

SUGGESTIONS FOR SUMMER AILMENTS

In the June number of CLINICAL MEDICINE I saw your request for "hints" for summer-time (and other) ailments. Here are a few:

Treatment of Snake Bite.—Ligate the bitten limb in two or three places (above the lesion), incise the bite at right angles (half an inch deep perhaps) and, with both hands tightly squeezing the limb, rub downward from the lowest ligature toward the wound six or eight times, keeping the wound under tepid water. Now untie the lowest of the ligatures, rub again downward and rub the bite so as to keep it bleeding. Alternate the downward friction and taking off the ligature, until all three are removed. Then, if possible, put on a cupping-glass (one can be improvised) letting it refill repeatedly half a dozen times. Then soak the wound in coal-oil for an hour. The wound heals as if it were a mere scratch.

Another Way of Treating Snake Bite.—Inject hypodermically in four places opposite each other and close around the bite, about 6 drops of a 10 percent solution of potassium permanganate, then apply a wad of absorbent cotton saturated with fluid extract of echinacea and allow to remain for six or eight hours. At the same time give a teaspoonful of the echinacea in half a glass of water every three hours.

Pleurisy.—Compound tincture iodine, locally, and iron iodide in pill or granule form, internally, is without a rival. Syrup of iron iodide is good too. [The treatment suggested seems best adopted to the chronic type, or to convalescence from the acute form.—Ed.]

Catarrh of the bile duct is often cured by hydrastis in small or medium doses. [But don't forget sodium succinate, especially when there is a tendency to chronicity. For the acute stages, with jaundice or "biliousness," try iris, podophyllin, the bile salts,

the salicylates, and laxative saline "drainage." Fit remedy to the case.—Ed.]

For Cholera Morbus.—Cocaine hydrochloride, grains 2; phenol, grains 2; elixir of lactopeptin, ounce 1. A teaspoonful after each time of vomiting. Eschew water. Vomiting ceases at once. For the pain, a hypodermic injection of hyoscine, morphine and cactoid or ¼ grain of morphine with 1/150 grain of atropine; to be repeated as needed. After six or eight hours' rest give this: Calomel, grs. 4; bismuth subgallate, grs. 3; saccharated pepsin, grs. 3. Make into 8 capsules. One every two or three hours; followed, if necessary, by castor oil. [When the stomach will tolerate them give the sulphocarbolates by the mouth; wash out lower bowel with aqueous solution of zinc sulphocarbolate.—Ed.]

For Urticaria.—Atropine sulphate, 1/150 grain granules, q.s. Give one granule every four or six hours. Also, at same time, give this: Calomel, grs. 4; ipecac, grs. 2½; saccharated pepsin, grs. 3. Make into 8 capsules. Directions: One every hour. [Urticaria often indicates faulty diet; if severe, clean out thoroughly, then feed *simply* for a while. Lime salts indicated according to Luff and Wright.—Ed.]

For Eczema.—Ammoniated mercury, grs. 30; zinc oxide, dr. 1; white vaseline, ounce 1. Anoint with this salve three times a day. In case it is for the face substitute lanolin, as vaseline causes smarting. Don't wash the diseased parts (hands or face) till cured, because soap and water, with friction, irritates any rash. The foregoing will cure nine-tenths of all skin diseases. [Always examine urine in severe cases of eczema; often excessive acidity needing correction. Autogenous vaccines have cured some severe chronic cases.—Ed.]

For Malaria in Children.—Calomel, grs. 6; bismuth subcarbonate, grs. 2; saccharated pepsin, grs. 2. Make into 8 powders. Directions: Give one powder every two hours, till the bowels have acted twice. At the same time give this mixture: Quinine hydrochloride, grs. 24; Fowler's solution of arsenic, gtt. 10; aromatic syrup of yerba santa, ozs. 3.

The dosage in the foregoing prescriptions is apportioned for a four year old child. If the fever goes above 102°, bathe the child in tepid or cool water every three hours.

For Chronic Malaria.—Give one or two grains of calomel every two hours till 6 grains have been given. Repeat this dose weekly, until the tongue cleans off. At the same time give the following mixtures: Tincture of hydrastis, ozs. 3; fluid extract of grindelia, ozs. 2; Fowler's solution of arsenic, drs. 2; elixir of calasaya, enough to make ounces 8. Directions:—Take one-half teaspoonful after meals. [In chronic cases of malaria, attention to the alimentary canal is of special importance; seek clinical asepsis. The arsenates of iron, quinine and strychnine, with nuclein, are ideal at this stage.—Ed.]

I may add, in conclusion, that all of the prescriptions herein mentioned have been found by me very helpful and some of them as near to being specifics as anything tried in twenty years of practice.

J. A. VISER.

Whitewright, Tex.

TREATING MALARIA SUCCESSFULLY

In a case of malaria, you are generally called during a paroxysm or during the fever. The following is my mode of treatment:

If the chill is on, give glonoin and atropine (or hyoscyamine), or 10 drops of chloroform (in oil, brandy or a capsule). If vomiting is present, give hypodermically morphine, ¼ grain, and atropine, 1/150 grain; which will stop the vomiting as well as the chill. Now a thorough cleanout with calomel, 4 or 5 grains, and bilein or podophyllin, sufficient. If stomach is irritable, give calomel with phenolphthalein, and follow with saline laxative.

For the next chill, begin with the antiperiodic about eight or ten hours before the expected attack. Give quinine bisulphate, not less than 10 grains, and repeat in four hours; then every four hours thereafter give of it 5 grains until well past the time for the appearance of the first chill and fever. Then give a tonic, which comes last in this series. Cold sponging during malarial fevers is very gratefully received.

Congestive Chill.—The treatment is the same as the foregoing, except that it requires more vigorous stimulation and external heat. Stimulate with quinine in large doses given hypodermically, and keep your patient cinchonized until all the danger is past. If it is the every-other-day chills, then give not less than 50 grains in the above quinine course before the onset of the chill, beginning eight hours before the chill. Tonic follows:

Algid Malaria.—Give hyoscine, morphine and cactoid or morphine and atropine, ¼ grain and 1/150 grain respectively, enough to keep the patient quiet, also give 15 grains of quinine and urea hydrochloride, repeating every four hours until the danger-line is past; intermitting in the interim one dose if it is of the every-day type.

Remittant Fever.—Give the usual treatment as to cleaning out. For the fever of the malaria and for the headache, nothing ever has equalled the acetanilid compound; and, for remittant fever, give equal parts of quinine and acetanilid compound, 2½ grains every three hours until the fever subsides. Then give 5 grains of quinine every two hours for three doses; after that three, four or six hours apart, extending one hour each succeeding dose.

Here is a *tonic* that never has been followed by a recurrence of malaria, unless there was a new infection; this is my formula: Quinine bisulphate, 3 grains; arsenous acid, 1/50 grain; strychnine sulphate, 1/50 grain; ferrous carbonate, 2 grains; podophyllin or phenolphthalein, 1-10 grain. Make into a pill and give one such dose three times a day.

Old negroes are prone to get hiccough from the continued use of phenolphthalein, so, give them podophyllin or aloin.

A. L. Nason.

Maben, Miss.

TO DESTROY THE FLY

A simple method of killing the common house fly, and one which is more effective and more sanitary than "swatting," is to use a solution of formaldehyde, which may be employed as follows:

Prepare a solution of nine parts water to one part of formaldehyde, pour in a flat saucer, and add a teaspoonful of sugar. Place in the middle of the solution a small sponge, piece of bread or rag. Renew solution every day.

INTESTINAL SUMMER TROUBLES OF CHILDREN

The following embodies the experience of more than fifty-seven years of practical professional work.

For summer diarrhea in children up to 2 years of age proceed as follows: Give 1 grain of calomel hourly for three doses [Doctor, isn't this unnecessarily large. We have found small doses—1-10 grain, repeated—equally effective.—Ed.], followed in six hours by castor oil. Give the necessary instructions as to diet or withholding of food. Usually all my patients—even the breast-fed—get only water for the first twenty-four hours after the above initial course; then I resume the cure. For pure dysentery, both in children in adults, give suitable doses of dilute sulphuric acid. In the case of children, in diarrheal cases, if the diarrhea continues after the oil has acted, I give 1-100 grain of bichloride of mercury every two hours until it is controlled, adding for the same age, 2 years, and under that at any age below, 1 grain of salicin every four hours while the patient is awake.

For cholera morbus in adults, give suitable hypodermic doses of morphine, say ¼ to ½ grain, followed at once by 1-grain doses of calomel hourly until the discharges change to a more normal condition.

For urticaria (acute), prescribe a suitable purge and a change of diet. For the chronic form, give arsenic to the limit.

E. H. Sholl.

Birmingham, Ala.

DIARRHEA IN BABIES AND ADULTS

You want some short ones, do you? Well, this is how I treat, and sometimes cure, diarrhea in babies and grownups.

Cut down some part of the diet (everyone to his own notion about that), order plenty of water to drink, and then, for medicine, prescribe this mixture: Bismuth subnitrate, dr. 1; camphorated tincture of opium, drs. 3; chlorodyne, dr. 1; neutralizing cordial, enough to make four ounces. The dose varies, of course, according to age. An adult would get a teaspoonful every hour or two, and a child of 2 or 3 could stand 20 drops.

In alternation with this, the W-A intestinal antiseptic (three sulphocarbolates) always is given. It may be necessary to give chlorodyne and paragoric, but for those colicky or griping pains it helps.

H. H. Schultz.

Sutton, Nebr.

[Another thing that often helps amazingly in infantile diarrhea is a reliable culture of Bulgarian lactic-acid bacillus, now available in tablet form. Even when milk diet is continued (it is usually ordered discontinued at once) the use of these tablets often brings the stool back to its normal color, odor and consistency.—Ed.]

DYSENTERY OF INFANTS AND CHILDREN

One of the most difficult diseases of children to treat is dysentery. This, briefly, is my ordinary treatment.

First give castor oil, either plain or medicated. [Laxol?—Ed.] This should be given n teaspoonful doses every two hours—for a child two or three years old—until it operates. Afterward prescribe the following mix-

ture: Camphorated tincture of opium, aromatic syrup of rhubarb, saturated solution of sodium and potassium tartrate, 1 ounce of of each. Label: Give one-half teaspoonful every two or three hours. This usually will relieve the abdominal pain and tenesmus, which is always so distressing in this condition.

Should the tenesmus continue, the following suppository, one to be inserted two or three times a day, will act well: Opium, grs. 2; extract of hyoscyamus, gr. 1; cocoa butter sufficient to make six suppositories.

The amount of opium in the two foregoing prescriptions should be regulated, of course, according to the age and weight of the child.

It is best to sponge the patient's entire body with lukewarm water two or three times a day. If the temperature is high, give tepid or cool baths. Keep the child's abdomen protected by woolen bandages. Give plenty of water, not ice water, but cool and pure. As the patient recovers, gradually discontinue medication.

R. B. HOPKINS.

Milton, Del.

ACUTE INFLAMMATORY RHEUMATISM

Yes, acute inflammatory rheumatism happens to be a summer disease here in this section of the country, up in Montana. Crops are grown by irrigation, and it seems that each summer, after starting to water the crops, a large number of cases of acute arthritis occur. My treatment, which is very successful, is as follows:

An initial cleaning-out with calomel, podophyllin and soda, in divided doses, is followed three hours later by a large dose of saline laxative or magnesium sulphate. Then the patient is placed upon a liquid or semi-solid diet and ordered to rest in bed or at least in a recumbent position.

Now sodium salicylate, 10 grains, or aspirin, 10 grains, is given every two to three hours until the patient feels easier, then less often. At the same time a tablet containing the following combination is given every four hours, viz.: Boldine, 1-64 grain; macrotoid, 1-12 grain; bryonin, 1-128 grain; colchicine, 1-250 grain; salicylic acid, 1 grain. This is the formula devised by Dr. Candler, and the remedy has acted well in all cases under my care for several years past.

I always neutralize the acidity of the urine by ordering alkaline drinks; water containing ½ to 1 dram of sodium bicarbonate to the quart, with a little lemon-juice to make it more palatable, does nicely.

Along with this medication I employ a Betz hot-air apparatus, giving the patient a thorough baking every day, running the heat up to about 450°F. These treatments quickly relieve the painful parts and are very acceptable to the sufferer. From an experience with a large number of such cases, I feel sure that the combined internal medication with the hot-air treatments brings a quicker cure than either alone.

I have used the modified rheumatism vaccine in several serious cases and obtained remarkable results; but all patients will not take this treatment, as the cost is high and some object to the injections. Recovery is very rapid in these serious cases. However, subsequent attacks occur, and they are almost as bad as those before this treatment was taken. This is contrary to the claims made for the vaccine treatment.

Following the lines of care as laid down here, with some variations, will prove effective in almost any case of acute inflammatory rheumatism.

F. E. MCCANN.

Salesville, Mont.

EXTERMINATION OF LICE

In the February issue of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, on page 159, I noticed an article taken from *The Lancet*, in which Whitfield recommends steeping the hair for ten minutes in a 1:400 phenol solution for the extermination of lice in women patients, and adds: "taking care to see that the nape of the neck and the hair over the ears are well soaked, the patient lies on her back, with the head hanging over the edge of the bed, the hair in a basin," etc.

From a textbook I cull the following:

"Treatment: Petroleum (pure) and balsam of Peru, equal parts, poured over the head, rubbed in with a white flannel; in twelve or twenty-four hours lice are destroyed. Shampoo with green soap, pure vaseline, or scented castor oil."

Similar treatments are to be found in the textbooks of all our great authors on theory and practice of medicine. What "tommyrot" these great authorities give us for our enlightenment. Certainly, these agents will kill lice—so would a sledge-hammer. But is it best to use it?

Did any of these great men ever use a microscope? And did they never view through it the spiracles of lice, fleas, flies, and all such insects and dipteras? The anatomy of the breathing apparatus of all of them is almost identical.

Every farm-housewife knows enough to apply lard to the head under the wings and on the breast of a lousy hen. And it does the work thoroughly, too. This is practical common sense *versus* the scientific (?) conclusions of the learned Solomons.

Now permit me to say that I have a remedy for exterminating lice that I have used for twenty-five years with unfailing success.

It may be despised by some of the erudite Esculapians because of its cheapness and simplicity. However, it is death to all kinds of lice, the pediculi capitis, p. corporis, or p. pubis — whatever their name or wherever their location. It is simply hair-oil—any nice hair-oil.

Let a woman or girl, man or boy troubled with lice oil the hair thoroughly at bedtime. In the morning all the lice will be dead. If there are nits, repeat twice or three times at intervals of a week.

I submit that to the average man or woman this is more acceptable than "red percipity" or phenol.

E. D. WING.

Galesburg, Ill.

[Who can give a better remedy for those afflicted with this troublesome parasite, which gets into the hair of so many children—especially those of the congested districts? Some of our schoolma'ams get to be experts in the treatment of these youngsters, and many of them claim good results with tincture or infusion of larkspur, applied freely where it will do the most good. It is harmless. Let us hear from the "family." —ED.]

RHINOPHYMA—AN EXAGGERATED CASE

I send you by this mail, under separate cover, a photograph of what to me has been a very interesting case of acne rosacea. It is interesting especially on account of the exaggerated hypertrophy, which must be very rare, for I have never seen another case that approaches this in the size of nodules, that are very disfiguring and a source of much embarrassment to this patient. In fact, it has converted him from an energetic business man and expert accountant into almost a recluse, for the reason that he wishes to avoid meeting people and hearing the whispered remarks so constantly made in his hearing.

To illustrate the nature of some of the expressions of surprise he would overhear made about him sometimes, there is a little story that is told here, that a while before he gave up all active employment and quit mixing with his fellows he was behind the counter in a grocery store, where he was working temporarily, and a little boy who had never seen him came in to buy a nickel's worth of peanuts. As the boy walked up to the counter, not seeing the old man's face, which was turned the other way just at that time, he said, "Mister, give me a nickel's worth of"—then, suddenly getting sight of the old man's nose, he started for the door, saying, "Oh, good God, what a nose," and never stopped to buy any peanuts at that store.

Dr. Strong's case of Rhinophyma

If you think this picture published in the journal would be of interest to your readers you may publish it with any remarks you may wish to make in regard to it.

B. F. STRONG.

Norborne, Mo.

[Following is a brief discussion of the treatment of rhinophyma, kindly submitted by

Dr. David Lieberthal, a prominent dermatologist of this city. Another paper upon the same subject, by Dr. E. A. Fischkin, also of Chicago, will be found in the leading article section, page 664, this issue.—Ed.]

TREATMENT OF RHINOPHYMA

For the correction of the deformity known as rhinophyma, which is caused by intensive hypertrophy of the connective tissue and the sebaceous glands of the nose, either mild forms of treatment may be employed, or else surgical means. The x-rays and also radium prove, at times, of great benefit. The same may be said of carbon-dioxide-snow applications.

The radical, or surgical method is either that by thermocautery or by the knife. With the flat cautery blade at red-heat smaller or larger areas are leveled down at weekly or fortnightly intervals, in the meantime dressings of boric-acid solution or borated vaseline being applied. The cold-cutting operation is performed, under general anesthesia, in two or more sittings, and consists either in excising wedge-shaped pieces and suture, or leveling off the tumor-masses by placing the blade flat upon the normal skin and cutting downward through their bases.

In employing the radical methods, care must be taken not to cut too deep, in order not to injure the cartilage; this being guarded against by placing a finger into the nostril and thus controlling the movement of the knife. Hemorrhage is considerable, but stops upon pressure. The after-treatment is the same as is used after thermocautery application.

In thus modeling the nose, it is well to be guided by a photograph of the patient, taken previous to the development of the rhinophyma. Inasmuch as the ducts of the copious hypertrophied sebaceous glands are extending from the surface of the tuberosities deeply into the subjacent tissues, their lower ends present, after the operation islands, from which epithelialization, or epithelial covering of the wound, takes place.

In some cases, after the parts have assumed normal size, it is necessary to employ rational external applications, for a complete cosmetic result.

David Lieberthal.

Chicago, Ill.

CORRECTION

In the article by Dr. F. F. Young, of Covington, La., on page 602 of the July number of Clinical Medicine, the statement is made that "this case occurred about two years ago."

This should have read "twenty years ago." Shortly preceding, the statement was made that in the interval the patient had five or six children, thus making the subsequent statement ridiculous

There is also an error on page 601. Instead of "five hours," in line 27, it should read twenty-four hours."

CANNED GOODS

The article in the February Clinic by Dr. Charles F. Lynch, on the canned-food industry, is most interesting, and is one that I wish every housekeeper might read. The enormous amount of fraudulent canned goods—meats, vegetables, fruit, etc.—that are daily palmed off on the public, especially in this country in late years, is astonishing, and almost beyond belief.

Take, for example, the matter of canned beef. I have been informed by a person who was interested in the stock-yards at Chicago that formerly only cattle of good quality were used for canning purposes, while now, during the last fifteen years or so, the canning-houses utilize the cullings of the slaughter-houses, inferior beeves, cattle having broken ribs and broken legs. One cannot today buy a can of beef that will begin to compare with the goods on the market in former years. Instead, nowadays the tinned beef is two-thirds stringy pieces of meat and one-third tallow.

And this criticism is equally true, as to quality, of the other canned goods now offered. Thus, the canned corn now on the market is nothing more than ordinary field-corn. Canned fruits are put up with starch-glucose sweetened up with saccharin—a preparation about as fit for the human stomach as is arsenous acid.

Unfortunately, this fraudulent use of saccharin will probably go on saturating, so to speak, the people with this slow and deadly poison until the mortality occasioned by its constant ingestion becomes sufficiently alarming to awaken the people or drowsy legislators to a realization of the necessity of prohibiting its fraudulent use, making the penality for such use a term in the penitentiary, instead of a farcial fine which the rascals can soon recoup, over and over again, from subsequent sales to their guileless victims. In view of the great abundance and low price of cane-sugar, there is absolutely no necessity

or excuse for the substitution of a poisonous coal-tar derivative in its place.

There are, probably, no other people on the face of the globe who are subjected to such impositions and fraudulent practices as ours, who would so tamely submit to them, even after the fraud is plainly pointed out to them. Barnum hit the nail squarely on the head when he said that the people liked to be humbugged. GEORGE D. STANTON.

Stonington, Conn.

[Really, as a loyal Chicagoan, I must rise to the defense of our principal industry. I have been in "the yards," not once, but many times, and I have seen, I believe, most of the departments and processes in the big packing establishments. Occasionally some sensation-monger may uncover something that is not exactly as it should be in the killing of animals and the preparation of meat for the market; but, all things considered, it is hard to find any business where more painstaking care is taken to turn out a cleanly, nutritious food products.

It is true, of course, that the best qualities of beef do not go into tin cans. Naturally the older, thinner animals are used for that purpose; but the meat employed is sound and free from disease, and it is thoroughly cooked so as to make it tender and palatable. A visitor to the "yards" is struck by the large number of Government inspectors (they are all graduate veterinarians) who are employed to inspect the animals before and after slaughtering. It is a clever man, indeed, who can get an unsound animal past their watchful eyes. The fact is, if you want to be sure that the meat you are eating is from healthy animals you will eschew that killed by the local butcher, often in some inconceivably filthy shambles, and will ask for Chicago beef!

Perhaps Dr. Stanton is right about the poor quality of canned corn offered for sale in some sections, yet I am sure most of the poor corn is also *cheap corn*. It is quite possible to purchase excellent canned corn, as the writer knows, because he likes it and buys it often—and he doesn't have to pay a prohibitive price.

The use of saccharin in any kind of food sold in interstate commerce is now prohibited by federal law, so that there is no cause for alarm regarding this "sweetener." But, to speak personally again, I am not at all afraid of saccharin, which in the quantities used as a sweetener in canned goods seems to me, if anything, less harmful than cane-sugar in the excessive amounts in which most of us Americans eat it.—ED.]

SOME OBSERVATIONS ON THE USE OF THE OBSTETRIC FORCEPS

I have been much interested in Dr. Rittenhouse's articles, and I agree pretty generally with what he writes. However, the Doctor did not mention two advantages that have been of great value to me. Of the different kinds of instruments, the Hunter is the only one for which I have any use. In delivering lengthwise in the bed, it is often difficult to depress the handles of a long instrument sufficiently to apply them, owing to the patient's sinking into the mattress. Here, the Hunter finds its most important use. In these cases, I have applied the blades when the head had not yet entered the superior strait and the handles have practically disappeared in the vagina. By taking hold high enough we can almost get the axis-traction effect, though I do not recommend this instrument for the hardest work, as the blades, being small, are liable to sink rather deeply into the cranial bones.

For application on the after-coming head, also, I think these blades are far superior to the instruments with the ordinary length of handles.

It is quite true that the axis-traction effect can be perfectly gained by tapes or traction-rods through the fenestra of the Hodge or any similar instrument, but, as this method requires an assistant and one may not always be at hand, I always carry my Tarnier with me, and it has helped me out of some difficult positions.

Some doctors seem to have a dread of the axis-traction instruments, as they think it makes greater pressure on the head. It is true, we can get much greater force with them, but with traction in the proper direction we accomplish the work with ten to fifteen percent less force than otherwise. This can be demonstrated by what is known to mechanical engineers as the "paralellogram of forces."

I fully believe that nothing is gained, but much lost, by exaggerated curves, both pelvic and cephalic. When an instrument slips, it is from one of three causes. First, we have relaxed the compression (this cannot occur with instruments having a positive lock, as the Hunter and the Tarnier); second, we have applied it on an oversized or a hydrocephalic head; third, the head will not enter the superior strait. In the first two cases, the head

may slip through the tips lengthwise; in the third it commonly works out transversely to the blades. Very broad blades, as those of the Hodge, obviate this tendency somewhat; but, of course, if there is great difficulty at the inlet of the pelvis, we are approaching the limitations of the forceps. Occasionally, too, the wide instrument is difficult to apply in a narrow vagina.

For ordinary use, some of my friends think that the Simpson is the only thing. It is an excellent instrument, but to me there is no practical difference between the Simpson, the Elliott, and the Jewett. I do not care whether I use a French or an English lock. A late invention in the axis-traction order is the Dewey forceps. This has a positive indicator, enabling one to pull exactly in the proper direction, but it is rather cumbersome, and I have never cared to change my Tarnier for one of them.

I had at one time, a great fancy for the solid-bladed Tucker McLane. I have long since abandoned this kind, as I find it difficult to make it hold without making an immense degree of compression; it also has a strong tendency to slip transversely in the higher positions.

H. O. Carrington.

537 W. 147th St.
New York City.

STATES OF UNCONSCIOUSENESS: SYMPTOMATOLOGY AND TREATMENT

Unconsciousness has been defined as insensibility. This is not absolutely correct, for in normal sleep we have a condition of unconsciousness, yet one could not, by the greatest stretch of imagination, say the subject was insensible when we know that he will react to even the slightest stimulus, as the touch of a hand, the prick of a pin or a puff of air.

It is not, however, my intention to discuss the physiology, but rather the pathology of unconsciousness, its etiology, diagnosis and treatment; not, indeed, at any great length, but hitting the high places, as it were, giving the most salient differential diagnostics.

How are we going to find the causes when called to treat one who has suddenly become unconscious? For without knowing the cause we cannot intelligently treat,

Wherein shall we find the difference between sunstroke and heat-exhaustion?

Sunstroke.—Here the onset of the attack is sudden, and it is due to the direct rays of the sun. It, therefore, occurs out of doors; the person's skin is dry and very warm; there is pyrexia—a temperature of 105° to 107° F., and even higher. Dyspnea is marked, the pupils are at first dilated and later contracted, the pulse is very rapid, and, in addition to the unconsciousness, there may be convulsions.

The patient is in danger from the hyperpyrexia. Therefore, reduce the temperature and do it quickly. Nothing is better than rubbing the body with ice, the cold bath, cold pack, cold effusions, or cold enemas; besides the hypodermic use of quinine bisulphate or of antipyrin. Should the temperature tend to rise again, wrap the patient in a sheet wrung out of cold water. Only in case of convulsions is the hypodermic use of morphine indicated. Should depression occur, give strychnine sulphate hypodermatically. Hypodermoclysis or enteroclysis may be indicated.

Heat-Exhaustion.—The onset of heat-exhaustion is gradual, being preceded by premonitory symptoms, as dizziness, headache, nausea, and vomiting. It is not due to the sun's rays, but to excessive heat in close, stuffy quarters, such as factories, engine-rooms, boiler-rooms, power-houses. The skin is moist, clammy and cold, and the temperature is normal or subnormal.

Unlike in sunstroke, we require here heat and stimulation. Place the patient in the recumbent position, with the head low. Hot applications are of great value. Give brandy or whisky, one-half to one ounce, or aromatic spirit of ammonia, 1 dram in hot water or hot milk. If the patient is unable to swallow these remedies, they may be administered by enema. Also give strychnine or digitalin hypodermically. [These may properly be associated with glonoin.—Ed.] As convalescence begins, tonic doses of quinine or of iron, arsenic and strychnine should be prescribed.

Apoplexy and Uremia.—Apoplexy occurs at or past middle life. We shall find in the victim arteriosclerosis, and this may be of luetic origin. There may be prodromes, such as vertigo, transient blindness, deafness, or local palsies. Although usually the attack is sudden, with hemiplegia, stertorous respiration, flapping of the buccinators on the affected side (that is, opposite the lesion in the brain), the temperature is first subnormal but soon becomes above normal. The pupils are dilated; although, if the hemor-

rhage be into the pons, we find pin-point contraction, while in uremia we find the characteristic suborbital puffiness due to nephritic conditions. The temperature is subnormal and remains so. There is an absence of stertor and paralysis. The tongue is dry and fissured, the odor of the breath is urinous, and there is more or less general edema.

In the case of apoplexy, immediately put the patient in the recumbent position, the head being elevated and turned to one side. An ice-cap should be applied to the head, and a hot mustard foot-bath given if the arterial tension be high. Venesection, or vascular sedatives like the tincture of aconite or of veratrum [better aconitine or veratrine. —ED.] must be employed. Give croton oil, 1 to 2 minims to produce free catharsis. Later the patient should be put on antiluetic treatment, if indicated: mercury, iodides, mixed treatment, or, better still, salvarsan.

In treating uremia, it is imperative to produce elimination through the skin, kidneys, and bowels. Give a hypodermic of pilocarpine, gr. 1-10; hot-pack or hot bath; calomel in broken doses every half hour; croton oil, 1 to 2 minims; also, venesection followed by hypodermoclysis, to dilute the toxins and stimulate the kidneys. Convulsions may be controlled by inhalations of chloroform.

Epilepsy and Hysteria.—Epilepsy may be preceded by an aura or the attack may be sudden. The limbs are extended, the hands are clinched and rigid; the spasm is first of the atonic, then of the clonic variety. The face is cyanotic, with frothing at the mouth, and the subject is very apt to bleed from having bitten his tongue or lip. The pupils are dilated, and the eyeballs turned or rolled upward.

In hysterical unconsciousness the coma is not complete—the patient will resist if attempts be made to open the eyes or move a limb. The attack usually comes on in the presence of others with a fit of laughing or crying, while the epileptic condition is no respector of time or place. The temperature, pulse, and pupils are normal. There is no frothing or bleeding from the mouth. In fact, these patients are very careful not to injure themselves, although they pretend to be paralyzed or choking (globus hystericus). The patient usually is a female, and the attack ends, as it started, with a spell of laughing or crying.

An epileptic attack is treated by placing something between the victim's teeth to prevent biting tongue or lips. Give hypodermatically hyoscine hydrobromide, gr. 1-100, to control the convulsion, and place the patient at rest in a dark, quiet room. Then give stimulants (digitalin) for the cerebral anemia. This for this particular attack.

Later, the patient should be placed on the bromides combined with cypripedium, as: Potassium bromide, ozs. 6; ammonium bromide, oz. 1; fluid extract of cypripedum, ozs. 4; tincture of opium, drs. 4; water, enough to make pint 1. Label: Take one dram before meals.

So far as my knowledge goes, this prescription is empiric, though I know of two cases in which an absolute cure was effected by it. The peculiarity of this treatment is this: that during the first three or four weeks the attacks are more frequent, then gradually become milder and less frequent. The treatment should extend two years beyond the last attack. [We urge the use of solanine, as a nerve sedative, to replace the bromides. Prof. T. G. Atkinson, of the Chicago College of Medicine and Surgery, reports remarkable effects from its use. Another remedy rendering good service is verbenoid.—ED.]

The treatment of hysteria demands, above all, denying of sympathy. Be kind but absolutely firm. Charcot recommends making firm pressure over the ovaries. Of the various drugs recommended (including Hoffmann's anodyne, spirit of ammonia, valerate of ammonia), I find that a hypodermatic dose of apomorphine hydrochloride, gr. 1-10, will bring the hysteric female to her senses quicker than anything else .

Alcoholism, and Opium Poisoning.—Alcoholic intoxication always presents the odor of liquor, but this alone should not make the diagnosis, since some well-meaning friend may have given the whisky after the onset of the unconsciousness. There is deep stertor, but the subject may be aroused by shouting into the ear or by making pressure over the supraorbital nerve. The patient will close his eyelids if attempt be made to touch the eye-ball. The face is flushed, the pupils are dilated, there is no paralysis, but a bilateral helplessness.

In opium poisoning, we have the pin-point pupil, respiration is slow and shallow, the pulse is full and strong, the skin at first is flushed and warm, later becoming cold, clammy and livid with the characteristic dirty-yellow pallor; there is no paralysis.

Treatment of alcoholism calls for emptying the stomach by the use of a stomach-pump or the hypodermic injection of apomorphine.

Also give spirit of ammonium internally. Place the patient in a warm bed, surround him with hot-water-bottles; and give strychnine, digitalin or nitroglycerin, to sustain the heart. For the delirium give 1-100 grain of hyoscine hydrobromide hypodermically. As soon as possible procure rapid elimination by bowels and skin, using appropriate remedies.

The treatment of opium poisoning consists in giving potassium permanganate, 10 grains, dissolved in plenty of water if called in the case early. The stomach must be evacuated promptly. Respiration should be maintained and the circulation supported—atropine, strychnine and digitalin. Give strong, black coffee and apply flagellation, to keep the patient awake.

Compression and Concussion.—Compression, as the name implies, is pressure upon the brain, the most common cause being fracture and depression of the skull; or the pressure may be due to a ruptured vessel, producing hemorrhage, either extradural or intradural. Tumors, gummata, and abscesses are also etiologic factors.

The pulse, in this condition, at first is full and slow, later becoming rapid and irregular; there is stertorous respiration and much puffing of the lips and cheeks, the stertor being due to paralysis of the soft palate, the puffing to paralysis of the facial muscles. The compression being usually unilateral, the pupils are asymmetrical, that on the corresponding side being dilated. There is paralysis of a group of muscles or an opposite hemiplegia, this paralysis causing retention of the feces and urine, followed by involuntary defecation and micturition from distention. The temperature may be cool, but usually is hot, with perspiration, and it differs on the two sides of the body.

Concussion or stunning varies with the severity of the cause, from a slight giddiness, vertigo or a confusion of thought to complete unconsciousness. Being closely allied to shock and rarely as deep as the coma of compression, the patient can sometimes be aroused by shouting. There being no paralysis, the muscles are flaccid and relaxed. Therefore, we find an involuntary evacuation of the bladder and bowels.

While the muscles are relaxed and the coma is not deep, yet the patient will resist any attempt on our part to move a limb or to open his eyes. The pupils are equal and unless the unconsciousness is very profound will react to light. The surface of the body is pale, cold and clammy, with a subnormal temperature. The pulse is weak and fluttering. Respiration is slow, shallow and sighing.

For cerebral compression, trephine the skull, raise or remove the depressed portion of bone, or, if the conditions be due to tumor, gumma, clot or abscess, such may be removed or drained (accordingly) through the trephine opening. Keep the bowels open and bladder empty. Keep the patient in the recumbent position, with the head low and kept cool by means of an ice-pack; and regulate the temperature. Should the latter be low, give stimulants; if too high, use the cold-pack or sponge-bath. Respiration often is interfered with by the tongue falling backward; to avoid which, turn the head to one side or pull the tongue forward.

In concussion of the brain, as in the treatment of shock, place the patient in bed, and cover him with blankets or apply hot-water-bottles, and cause friction to the surface of the body. Stimulation should be avoided, for fear of exciting cerebral hyperemia or hemorrhage. The bowels should be made free and active by the use of calomel to croton oil. The room must be kept dark and quiet. Nourishment may be given with a spoon, while in severe cases nutriment may be introduced rectally or per nasal tube into the stomach.

A. A. GEBHART.

Rogers, Ark.

GENERAL SIBLEY'S PRAYER

I have read Dr. George D. Swaine's excellent story, "The Quality of Courage and a Chloroformed Indian," on page 608 of your magazine for July, 1913. I have enjoyed the portion of it devoted to General Henry H. Sibley's experience upon Bigstone Lake, but fear it does a grave injustice to the memory of one of the great men of the Northwest. General Sibley was a religious man, from his youth up, coming from a family of sound religious practices, his father an Episcopalian and his mother a Moravian. General Sibley made a public profession of religion at Mackinac in 1830, when 19 years of age, and joined the First Presbyterian Church at that place.

When the missionaries came to Minnesota in 1835, he was their ablest supporter and assistant. He joined the church which they organized at Fort Snelling and was an officer of it for many years. When, however, an Episcopal church was organized at St. Paul, he affiliated with it and was a vestryman of it

as long as he lived. He was exceedingly chaste in his speech and was never known to use profane language.

DOANE ROBINSON,
Pierre, S. D. *Secretary and Superintendent*
Dept. of History, State of South Dakota.

CACTOID IN SEA-SICKNESS

During the two last voyages of the ship Voltaire, from New York to South America, of which I am surgeon, I have had to attend but one severe case of sea-sickness. This is excellent testimony in favor of sea-voyaging in these waters, but it gives us little information as to the action of cactoid in sea-sickness, a drug with which I am now experimenting.

The case noted above was that of a fat, middle-aged woman in whom the disturbance had advanced so far that she was unable to raise her head from the pillow without its provoking the act of vomiting, nor was she able to retain anything swallowed. One full-strength H-M-C tablet, given hypodermatically, gave her a happy issue out of her affliction.

I have found cactoid of undoubted service in the "stage of uncertainty" and before the severe stage of *mal de mer* above described becomes established. Its action may be likened to that of a force which carries forward a wheel "stuck on the center."

I append a few illustrative notes.

Case 1.—Italian lady, about 50 years, good physique; suffered headache, lassitude, dizziness. I gave her ten granules, one to be taken every twenty minutes, until better. Prompt restoration. She asked for more.

Case 2.—Brazilian lady, 40 years, good health. Usual preliminary symptoms. Treatment as in Case 1. Recovery. She asked for more granules.

Case 3.—Italian girl, 19 years. Good physical condition. Not depressed or otherwise disturbed, but could not retain her meals. This is a common condition and the vomiting resembles that of certain cerebral disturbances in not being preceded by nausea. A few granules of cactoid gave prompt relief. She asked for more. (I do not know whether this "Oliver Twist" characteristic is referable to sea-sickness or to cactoid!)

Cases 4 to 9.—These are so alike that they may be described as one. Six strong, healthy men, from 25 to 30 years, lying in their bunks, moderately ill and too indifferent to get on deck. Sea rather rough and vessel lively. I gave them each six granules. They were all on deck in a few hours and not again disturbed.

I have not yet tried cactoid hypodermatically, and do not know whether it is recommended to be used in that manner. If yes, it might be serviceable in advanced cases, where the stomach retains not even a spoonful of liquid.

S. AUSTIN DAVIS.
Brooklyn, N. Y.

PILOCARPINE POISONING. ALSO TWO CLINICAL PROBLEMS

Case 1.—*Nausea of pregnancy.*—There was no vomiting, but uninterrupted nausea; also aversion to food, with consequent loss of weight from starvation. Copper arsenite was tried, with some temporary benefit; colchicine also was temporarily beneficial. Nothing, however, gave either complete or permanent relief, till sodoxylin was tried. This cured promptly. The medicine was stopped after two days, and the nausea did not return.

All the time the patient's urine was persistently *alkaline*. There is a history of an attack of acute cystitis five years ago, but no symptoms since that time were observed, and there are none now, except that tests of the urine suggests a mild chronic cystitis. Please explain.

Case 2.—*Stupidity.*—Boy of 7 years. Family history: Maternal grandfather, a retired physician, suffers from senile dementia at the age of 75 years; is said always to have been peculiar. This man had five children. The first, second and fourth died young. The third, who is the present patient's mother, is normal, as is also the youngest of the five. Family history otherwise negative.

Previous history of the little boy: Congenital diabetes insipidus, which was gradually outgrown; but the amount of urine is still above normal, averaging 40 ounces in twenty-four hours. As a little child, the patient was unusually bright. At 4 years, he was able to read in the First Reader, although he had never been to school, and had only a little spasmodic teaching from his parents. At this period, his brightness gave place to extreme mental dulness and stupidity. He forgot how to read, was loud-voiced and noisy, but never developed an idea of his own, merely repeating what he heard others say; memory was greatly impaired. Otherwise he seemed perfectly healthy, as frisky

as a young colt, could easily run a mile without stopping or getting tired or winded. He grew very fast and is now as large as the average boy of ten or twelve.

Since the onset of this mental trouble, the child has had no diseases, except an occasional cold; but previous to his third year he had measles, pertussis, and nematodes. At ten months, he had an attack of amebic dysentery, which nearly ended his life.

He has been under medical care from time to time for the mental trouble, and various remedies have been tried, but the only one which has done him any good is effervescent saline laxative, in a daily small (diuretic) dose. Five or six weeks of this treatment brings the mentality up to normal, where it will remain without use of the saline, for a week or two; then he relapses till the saline is again resorted to. Several other laxative salines have been tried, but none have given the same benefit. Several times he has had a thorough course of "clean-out and clean-up" treatment, with the combined sulphocarbolates, and with sodium sulphocarbolate alone, both being followed by galactenzyme, and all remedies being pushed to effect; but they have no observable effect on the boy's mental condition if the saline is not administered at the same time, while, if this is given, the others add nothing to the treatment.

He has been observed to be brighter during the orange-season. Whenever he is eating as many oranges every day as he wants he does not need the saline laxative. The orange being a mild diuretic, various other diuretics and urinary antiseptics have been tried, but without influencing the mental condition.

Chemical uranalysis has been made from time to time. Usually nothing abnormal, except for the large quantity, is found. At one time a temporary hyperacidity was promptly reduced to normal by sodoxylin, but without the slightest effect on the mentality. No indican has ever been found, no acetone, no sugar, no albumen. Physical examination is negative—every organ appears to be normal.

It seems to me that the evidence, such as it is, indicates that the trouble is caused by an autointoxication. But that is as far as I can get. What produces the toxin, and where? What will cure or remove the cause?

Case 3.—*Pilocarpine poisoning.*—A boy just two years old, and the picture of health, climbed upon a chair from the seat to the arm, and thence to a table, where he found a box of tablets which had been dispensed for an older member of his family. Each of these tablets contained 0.005 of pilocarpine nitrate, 0.005 of arsenic trisulphide, and 5 minims of solution of sodium triticonucleinate. The family were attracted by his falling on the floor.

When I first saw the child, about an hour after the accident, he presented a startling picture of the extreme effect of pilocarpine. Muscular relaxation was so complete that he was practically paralyzed. Almost the only muscles he could use were the small vocal and ocular muscles, and these were pretty weak. The skin was bloodless and cold. There was no sweating, on account of the age of the child and the excessive dose, but the other glands were active enough. There was coryza, bronchorrhea, sialorrhea, etc.; respiration rattling; no pain or other symptoms.

I gave emetine, 1-3 grain, which acted immediately, bringing up yellow granular material equivalent in amount to about two tablets. The stomach was then washed out two or three times, the water coming away perfectly clear. Then I gave atropine. Four hours later, the little fellow was running around, well, except that he was still a little pale and very thirsty, but if allowed to drink all he wanted he would throw it up. I told the mother to give him water by the teaspoonful, and this he retained. The next morning thirst was still a little excessive, but otherwise he was as well as ever.

The scattered tablets were picked up and put back in the box, which was then half full, as near as could be gauged by the eye. I counted the tablets and found 155. The box had been left full the evening before, and only two or three doses had been taken out of it. The baby must have eaten and absorbed at least 100 tablets—probably more—equivalent to 8 grains or more of pilocarpine nitrate.

This baby also took 8 grains of arsenic sulphide, which produced no symptoms at all. Is this drug really the dangerous poison it generally is believed to be by those who have never tested it? Or is it time to stop being afraid of the word arsenic in the name of this compound?

CHAS. F. MORRISON.

Apopka, Fla.

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[Whatever became of the pilocarpine and arsenic, the baby *could* not have absorbed the quantity stated; had he done so there would have been a funeral—sure! Probably the emetics and the stomach-washing brought

up much more of these substances than seemed possible. Arsenic *is* an extremely dangerous drug. The other two cases are of extreme interest, and we hope our readers will discuss them. Let us have your opinions.—ED.]

THE WORM TURNS

It takes a long time for news to arrive at Podunk, or at least to make an impression on its inhabitants. I guess that must be the reason why it has just now, June 1, filtered into my bean what the surgeons of America are up to.

This new society, The American College of Surgeons, is a very amusing affair. It makes me mad, though, the more I think about it. I don't object to the society, *per se*, in the least, but I do object—and most strenuously—to the underlying assumption, viz., that any kind of an M. D., or possibly only a licensee without the M. D., is fit to be allowed to doctor fevers of all kinds and chronic disorders of the circulatory, excretory, digestive and nervous systems, that require only indirect treatments, while only an especially trained man is to be allowed to treat diseases locally. The bulk of surgical cases are pronounced such, and referred to surgeons by humble general practitioners of medicine.

Dr. G. Prac is expected to keep himself posted on the latest methods of diagnosis and to be able to distinguish a medical from a surgical disorder at a moment's notice. The diagnosis must be made at all times of day or night, by tired and worn-out doctors, without help—and too often without the sympathy of the family, once an operation has been suggested. If the case comes to operation, and that is successful, the surgeon gets the credit. If it turns out unsuccessful, the doctor is blamed. "Waited too long!"

Any regular M. D. with surgical aspirations, posessing what we call "natural Yankee mechanical ability," can become a good surgeon if he has a chance to practice, i. e., just as good a surgeon as a physician. If he hasn't brains to begin with, he won't be a genuine success at either. But the underlying assumption of the new society is that surgery requires exceptional skill, and what is quite as important, that surgeons are more skilful than ordinary M. D.s. The promoters claim that the teaching of surgery in our schools is deficient. Amen! How about therapeutics?

What proportion of the M. D.s being graduated from any medical school in the country has ever observed, much less treated, a case of diphtheria from start to finish? (I practiced medicine for over nine years before I ever saw a case.) Or doctored scarlet-fever, or even a protracted case of grip with cardiac complications? Or been responsible for a case of diabetes (which I have yet to see), or puerperal fever, or even a case of catarrhal croup with suffocation threatening?

On the other hand, these men have seen cases of appendicitis galore operated upon, until they cut the clinics, so tired were they of hearing the same old tale, "First we cut through the skin, subcutaneous fat, muscle," etc., etc., etc.,—you all know the different layers. Hysterectomies are common sights. Prostatectomies are frequent. Mastoid operations are passed by in contempt. And any second-year student knows the coverings of the various forms of hernia, and how Mr. Bassini advises that they be fixed.

As a matter of fact, the only thing the modern graduate from any of our eastern schools does know anything about when he is graduated is surgery in all its various branches. And the one thing he is densely ignorant about is drug therapeutics. I don't blame the boys. They know as much as their teachers, if some of the ex-laboratorio statements which have been appearing in recent medical journals (*in re* cactin, for instance) are fair samples of what their professors know about therapeutics. They can nearly all of them diagnose the major surgical diseases; and if they can't, they can at least make an exploratory incision or get someone else to do it, and so be on the safe (?) side anyway. But how many of them can give an opinion that is worth the breath it takes to utter it when measles, German measles, and scarlet-fever are all epidemic in the community at once?

My opinion is not worth a whole lot even yet, and it was worth still less ten years ago. And during my first few months of practice I don't think that any of my timorous, suspicious, deadbeat patients were in as much danger of a hasty operation for gallstones, or appendicitis, or an unjustifiable laminectomy at my hands as was the whole town because of lax quarantine, owing to my hesitating and questionable diagnoses of exanthemata. No, no, defective teaching cannot excuse the birth of this new organization.

I was once talking to a very skilful surgeon who has made for himself a well-earned reputation. He took up surgery immediately after graduation, and had never seen general practice, particularly obstetrical work. He was in a small city and treated every case that

was referred to him, medical as well as surgical. "Do you take obstetric cases?" I asked. "Only in consultation" was his reply. Why should anyone want him as a consultant? I'd rather have old Dr. Jones from the next town, with his faulty surgical technic and rubber-handled forceps than the aforementioned professional consultant.

How many surgeons outside of the very biggest cities turn down medical cases if they can be sure of their fees? How many of you men calling yourselves by that delectable name, "surgeon," feel able to fill the shoes of some of our good old-fashioned—no, *new*-fashioned country doctors who are sending their occasional surgical cases to you for operation?

There is Dr. X, my neighbor in the next town of Squedunk, who attends to all his obstetric difficulties himself (did a Cesarean section once by candle-light; and the woman got well too—but it didn't get reported in the *J. A. M A.*). He sets broken bones and gets good results. He fits glasses, and does it pretty well, too. Once in a while he straightens out a refraction case that one of you fellows in the city failed on because you were too hurried to use a mydriatic. He has never yet had to intubate a case of nondiphtheritic croup, because he knows how to use aconite, spongia, and calx iodata. He has a microscope, and knows a cast when he sees it. And when it comes to fevers, he can make all of you feel silly. His cases are not as protracted as they are in the hospitals in your city, and his patients are more comfortable during the process too. And the number of apparent surgical cases which recover under his treatment (not the expectant variety, but the therapeutically active kind, which you would report to your society as having been operated on "just in time") would astonish you.

I have talked with many surgeons. Most of them have gone into the whittling-business, because it is is "more satisfactory," as they say. Further inquiry generally elicits the reason for their unsatisfactory results, viz., total ignorance of drug-therapeutics. They were too lazy to learn! Surgery is a snap as compared with honest, successful general practice, in the country at least. We fellows in the country object to being treated as primary scholars in the medical art and made to worship King Scalpel.

Require special training in surgery as a necessity for membership in your society. That's all right. And then insist that no surgeon who has not had special training in drug-therapy under acknowledged masters of the art, and then proved his abilities in this line, shall be allowed to deal out pills "on the side." Allow none of your members who have never been engaged in general medical practice to treat, either privately or in consultation, cases that lie entirely within the domain of internal medicine, the sphere to which you wish to confine the activities of the ordinary M. D. Unite with us in keeping the professional hygienist and sanitary expert from meddling with drugs, the use of which he knows little about. And then, after we have selected the purely surgical cases from those which are entirely or partly medical, and instructed you to treat the medical part of the disorder, we'll all of us be glad to turn over to you more of our surgical cases.

This suggestion, Mr. Surgeon, is made in all kindness. You are an indispensable helper, a necessity in time of need, but you are not the "whole show." I have had some disgusting experiences with drug-ignoring doctors which I shall be glad to tell you about if you will only call at my office. And after you have heard the tales you will not wonder that I have made the suggestion to form an American College of Drug-Therapists, with the avowed object of keeping surgeons from practicing general medicine until they are fitted for it. Its members might be able to help you sometimes when you are in doubt as to how to proceed.

NEW ENGLAND PILL SLINGER.

Podunk Corner.

THE ATROPINE TEST IN MENINGEAL AND CEREBRAL CONDITIONS

The description of this interesting test is abstracted from *Sémaine Médicale*, in which it has been described by Drs. Roch and Cottin. It depends upon the fact that in cases of bradycardia in which the slow pulse is due to stimulation of the vagi, either centrally or in the course of the nerves, an injection of atropine paralyzes the intracardiac nerve-endings of the vagi and thus causes within a short time a well-marked acceleration of the heart-beat. The dose of atropine required is very small; 1-5 milligram of atropine sulphate being sufficient to produce the desired effect, which is manifest in a quarter of an hour and attains its maximum in the course of an hour. In very obscure cases of meningitis, with slow pulse (40–50) and uncertain symptoms, which the author described, the diagnosis was established by the atropine test, by which the rate the heart-beats was accelerated to 80 or even 100 a minute.

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

THERE is one peculiarity about the daily life of the people of this country that is more marked than in other races, and that is, the high pressure at which all classes of the community appear to live. Feverish haste to amass wealth, struggles for preferment and promotion, work to retain a certain position, if not to improve that position in society, the rush after pleasureable excitement. All these combine to create impatience and unrest in the human mind. The mind soon gets into a certain groove from which it becomes impossible to extricate itself, and very soon insomnia, nervous prostration and concominant results follow, and the victim, quite conscious of his hopelessness, is compelled to take an absolute rest in order that his nervous system may regain its equilibrium.

Nature is not to be trifled with. She is certainly very patient of neglect; but of one thing we may be perfectly assured, and that is, sooner or later she will assert her rights, and with no uncertain voice. She warns us by aches and pains, and narcotics and stimulants resorted to to make us forget, until the strain can be no longer borne and there is a collapse.

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Another cause of this sudden giving way of vital forces is to be found in the never varying treadmill kind of life so many of us lead year after year—no change, nothing to relieve the dread tedium and monotony. Examples of such affronts to nature in the violation of the most simple rules are, unfortunately, only too numerous, and every doctor has patients whom, he knows, nothing but absolute rest and change of scene can cure. It is surely time that the "whip and spur" were laid as de, and that there should be a cessation of this hurry and drive.

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Prominent among the prevalent popular errors is that which regards the children of the poorer classes as superior in vitality to those of the rich, and looks upon wealth and ill-health as synonymous. Dr. Humphreys has shown that measles is ten times more fatal among chldren of the poor than among the rich families; typhoid fever five times as fatal; convulsions, thirteen times; scarlet-fever, twice, as rich and idle people live longest, and professional men next, while hard work everywhere shortens life.

When it is remembered that the homes of the poor, the factories and shops usually are unsanitary, and when it is further remembered that child labor has been a feature even of English-speaking social conditions for, at least the last three centuries, this diminished vitality can be regarded as only a natural result.

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Americans do not enjoy the vitality which Dr. Humphreys has found among the English wealthy classes, and for obvious reasons. The Englishman usually retires from business when he has achieved a competency, or he studies science or does something akin at the same time. The American does not. The Englishman, by his rational mode of life, escapes that most devastating influence of emotional overstrain from anxiety. The same is true as to the professional classes of both countries.

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Emotional and moral anesthesia, as well as the freedom from emotional overstrain, plays a large part in determining long life. Paupers and other degenerates for that reason live long, when once they have passed the great periods of stress. Goethe acknowledged this when he wrote:

....The method is revealed:
Without gold or magic, or physician.
Betake thyself to yonder field,
Then hoe and dig, as they condition;
Restrain thyself, thy sense and will,
Within a narrow sphere to flourish.
With unmixed food thy body nourish;
Live with the ox, as ox, and think it not a theft
That thou manur'st the acre which thou reapest;
That, trust me, is the best mode left
Whereby for eighty years thy youth thou keepest.

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The popular opinion that long life is the test of vitality in a family is demonstrably erroneous. The average degenerate family contains one long-lived emotionally and

morally anesthetic member and several members who have died under the age of five.

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The vitality of long life as an evidence of biologic strength turns upon the environment in which the life has been led. Judged by this standard, general vitality has risen because of the general intellectual improvement, not because of an increased moral and emotional anesthesia. For this reason, men of broad culture now are found far more frequently among octogenarians, nonogenarians and centenarians than formerly, culture having fitted them to the strenuous intellectual life.

The American business man, unfortunately for himself, has the philistine notions of rural communities as regards aught but money making. English business men are prominent among scientists; but no later American business man has attempted to rival the fame of our Franklin. Scientific business men, especially if bankers, like the late Lord Avebury, would be looked upon in America as monstrosities deserving treatment in an insane hospital. Although America has had a banker-poet, in the person of Stedman (who is on the level with the English banker-poet Rogers), still, certain professors of literature in subsidized universities have held that the creative power needed in money-making must of necessity debar either scientific or literary success from crowning a financier.

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One factor determining the relative vitality is the use, or otherwise, of alcohol. According to the editorial columns of the average newspaper, even the moderate use of alcohol is destructive of vitality, but according to the advertising columns, a certain brand of whisky has been (so numerous nonogenarians and centenarians testify), the chief cause of a healthy old age. Comically enough, some statistics regarding centenarians, if analyzed, would tend at first sight to support these claims, as the proportion of occasional drunkards among the centenarians is rather larger than is that found among the ordinary population. The usual half-truth of analyzed statistics is here noticeable, since the morally, emotionally anesthetic degenerate does not display the usual degenerate intolerance of alcohol which creates so many total abstainers and alcoholophobiacs.

The influence of alcohol in the production of disease and social defects is, however, overestimated, as the use of it more frequently is a consequence than a cause, while, further, it aggravates the conditions that produced its abuse. The influence of the emotional overstrain of poverty in lessening vitality is equalled only by that of the speculative atmosphere, the great cause of conditions like paretic dementia that sap the vitality of the business man without culture.

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There is in this workaday world a large class of people who seem incapable of taking life soberly, however serious the intention. An exuberant vitality that finds no natural outlet turns to the sensational and marvelous as naturally as the toper to his cups. Mental intoxication he must have if he is debarred from physical stimulus. To such a mind, the rehearsal of a "miraculous" cure, especially when painted with the fire of religious enthusiasm, thrills through and through and drives into the background the sober thought of his better senses. A personality adroit, magnetic, and unscrupulous, by its overpowering vitality readily takes captive and enslaves these weaker minds. But this condition cannot continue indefinitely. After every debauch there is a tomorrow, and even the most trustful ones are likely to awaken to a condition of enlightenment, when circumstances drop them down hard on the bedrock of common sense.

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It is comforting to know, however, that the aggregate number of those believing in curative occultism, for instance, is far less than ever in the world's history. Where today a few thousand profess adherence to an erratic theory, in former epochs of man's intellectual development entire nations, like the Hindus of the present time, were subservient to every art which the skill of the magician or the dreams of the illuminati could suggest. True, we find in every great metropolis a few soothsayers, astrologers, and, at extremely rare intervals, an alchemist—a veritable apparition arisen from the dead.

Yet, the callow clientele which encourages such imposture is almost exclusively composed of silly women and senile men, who, under the most favorable conditions, could not by any human possibility exert the slightest influence upon the world's progress, nor affect in the remotest degree the happiness of mankind. Other, more rational, delusions of the intellect, may claim passing tolerance, even respect, but for the sibyl and astrologer of the twentieth century, compassion for fellowmen demands that we should have no mercy whatever.

Under the influence of a cathartic dose of resin of podophyllum (podophyllin), the intestinal and hepatic secretions are augmented and after a considerable time copious alvine evacuations result. The action of the drug is attained by marked peristalsis, giving rise to considerable pain and griping; which, however, may be modified by such agents as leptandrin, hyoscyamine, and atropine. When associated with other purgatives, care should be exercised to select those only which, like itself, are tardy in their action. The cathartic action of the drug is increased by common salt. Calomel and podophyllin is a very popular combination. A still better one is calomel, podophyllin, and bile-salts; which constitutes an ideal combination for the treatment of biliousness.

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Podophyllin is an active hepatic stimulant and cholagog, being peculiarly appropriate remedy in that condition known as torpor of the liver. The constipation attending hepat c cirrhosis and cancer, as well as that from any hepatic disorder, is well treated by podophyllin.

The slowness and completeness of its action, together with its property of stimulating the functional activity of the liver, renders the drug extremely serviceable in the treatment of habitual constipation from any cause.

In addition to its cathartic action, podophyllin acts as a mild diaphoretic and alterative, inducing ptyalism in some persons. In very small doses, it unquestionably stimulates the sympathetic nervous sytem, acting principally upon the parts supplied by the solar plexus.

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While podoyhyllin is used chiefly as an hepatic stimulant and to overcome constipation, it has many other important uses. Thus, in cholera infantum and summer diarrhea of children, very small doses exert a most beneficial influence. It is a valuable remedy, also, in cardialgia accompanied by constipation; in gastric catarrh; in cardiopathies when aggravated by hepatic inactivity and portal torpor; in hemorrhoids dependent upon biliary insufficiency with portal congestion; furthermore in certain renal and skin disorders, and in the forming stage of many febrile affections.

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It is astonishing how an aggressive chump can butt his way in and succeed simply on his nerve. He has to take many a hard bump, but his hide is tough and his skull is thick, so he doesn't mind. To a conservative person he is as nauseating as limburger cheese is to an Irishman, but he unquestionably gets there.

If the newly made millionaire would only be patient and not make any serious bad breaks, he could squeeze into any seat. It may be expensive, slow work, and cost him many rebuffs; but, if his patience, and especially his money, holds out, it is only a question of time.

Wealth has its drawbacks. A rich man can never be certain who are his friends. Let him experience a little reverse, and they disappear like fog at sunrise. The few who stick by him are likely to be those he valued least.

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Rotten apples are easiest to find; so worthless friendships are the easiest to form.

Lightheaded men are welcome at afternoon teas, because they never make the rest of the company feel like idiots.

Because people seem like donkeys does not signify that they actually are. Perhaps they are rich and aristocratic and don't have to display intelligence.

The less a man has in his skull the more he needs in his pockets

The spendthrift may not be a wise financier, but even if he ends in the poorhouse he will get a lot of consolation from the joy he remembers.

Any old plug can get along if he pounds away hard enough, but only the brilliant man can bat around half the night and then accomplish great things next day.

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The sallow man you see quietly taking tea and toast in a far corner of the restaurant may be a millionaire, but the hearty fellow who is shouting for terrapin and canvasback is probably scarcely earning a hundred and fifty a month.

Nothing is so depressing as remorse. Nothing is more weakening to the moral fiber than good resolutions that are likely to be broken.

The finest thing a hog can think of is a trough full of swill and some soft mud-puddle to lie in and sleep. These ambitions are easily attained and the hog enjoys itself. If you want to be happy, then cultivate thoughts like the hog.

It is a heap easier to row down stream than to pull against the current. Besides, at the end of your journey you will find that you have gone a lot farther.

The most damnable handicap a man can struggle under is the belief that he is not as good as some other.

AMONG the BOOKS

THORINGTON: "PRISMS, AND THEIR USE"

Prisms, Their Use and Equivalents. By James Thorington, A. M., M. D., professor of diseases of the eye in the Philadelphia Polyclinic and in the College for Graduates in Medicine. With 118 illustrations, of which 18 are co ored. Philadelphia: P. Blakiston's Son & Co. 1913. Price $2.00.

This book represents another addition to the growing series of manuals on refraction from the pen of Dr. Thorington, who continues to hold first place among the writers of popular books on this subject—and deservedly so, for he is, in our opinion, the clearest and most practical writer on this side the Atlantic.

We wish that we could urge upon our readers the importance (not to say the profit to themselves), of providing themselves with a set of books like these of Thorington's, together with the necessary armamentaria, and of following up this kind of work. A set of these books—"Refraction and How to Refract," "Retinoscopy," and "The Ophthalmoscope, and How to Use It," with the present one on "Prisms" now added to it—will give the practitioner practically all the information he needs for the successful carrying out of his own refraction-work. They are all simply and plainly written, and, with a very moderate degree of scientific training, the physician can readily comprehend them and translate them into practice.

BLANCHARD: "WAYSIDE EXPERIENCES"

Wayside Experiences: A Collection of plain Tales as Heard Along the Road. By C. Elton Blanchard, M. D., author of "Dr. Betterman," "Medical Dollars and Sense," etc. Newark, N. J.: The Physician's Drug News Company. 1913. Price $1.25.

Dr. Blanchard has collected in this volume some very interesting short stories, all of them about people in whom the doctor has a special interest. You meet them all in your practice. There is the young man who contracts syphilis and then marries, and pays the price in three ruined lives; there is the confession of the second wife—the nurse who loves her doctor, not wisely, but too well; the patient whom drugs could not cure and who defied the efforts of the doctor until Dr. Xury came along with an unusual (and effective) form of psychotherapy; the grass-widow, with a life-story of abuse and neglect; the story of the childless wife and how her home was made happy—and still others. We see these people, every day, and these stories of their troubles and their final triumphs (for happily Dr. Blanchard finds a silver lining in nearly every cloud) all ring true.

You will all enjoy the first story in the volume, "Dr. Jones's Farm for Down-and-Outs." On this farm, the good old physician attempts the physical and spiritual regeneration of men who have been fighting the battle of life, and who feel that the tide has turned against them. Not only does he make his charges well, through bringing them back to nature, but, what is better, he gives them hope, faith in themselves, and a sense of human brotherhood. Dr. Blanchard has embodied in this story a bit of practical idealism, which is probably "the shadow of things hoped for"—a dream that he hopes some time in the not too distant future to see realized.

Read the book! Not only will you enjoy it, but it is one that will do good, clean, medical-missionary work if placed in the hands of your patients. Incidentally it will do *you* good.

TIBBLES: "FOODS"

Foods, Their Origin, Composition, and Manufacture. By William Tibbles, LL. D., M. D. London: Bailliere Tindall, & Cox. 1912. Price $4.50.

Considering the immense part that diet plays in maintaining the health of the human body, and even of the mind, and in view of the tremendous strides that have recently been made in the chemistry of food-stuffs and of body metabolism, it is strange that dietetics, as a science and an art, should lag so lamentably behind the procession. That

it does lag behind, no one, we think, will seriously question.

The defect, however, is almost wholly on the side of practice. A great deal of excellent work has been done and literature published in the exposition of dietetics. But the practitioner does not seem to have realized the importance of an exact knowledge of the subject; so that medical men, who are giving their patients all the advantages of modern research and progress so far as therapy and surgery are concerned, are still pursuing the old happy-go-lucky course of a century ago in the matter of dietetics.

The book under review calls for neither criticism nor justification; it speaks for itself. Be it our part to urge upon our readers the importance—nay, the crying necessity—of possessing themselves of a copy, and to make its contents an integral, practical part of their day-to-day work.

CHOYCE AND BEATTIE: "SYSTEM OF SURGERY"

A System of Surgery. Edited by C. G. Choyce, B. Sc., M. D., dean of the London School of Clinical Medicine, and J. Martin Beattie, M. A., M. D., professor of pathology and bacteriology at the University of Sheffield. In 3 volumes. New York: The Funk and Wagnalls Company. 1912. Price, per volume, $7.00.

Years ago it was the custom for medicine as well as for surgery to maintain in its literature a goodly supply of short, comprehensive textbooks or manuals that covered the entire subject, in a concise, summary fashion, for the use of the general practitioner. We have always regarded such books as most excellent things—as being, indeed, the birthright of the practicing physician. In internal medicine, the custom never was abandoned, but persists in its continuity to this day; in surgery, on the other hand, it gave way almost wholly to the publication of large and exhaustive works on the various surgical specialties and of equally voluminous encyclopedic "systems."

We are glad, indeed, to see the olden way revived in the work now before us. We do not overlook the fact that even this present undertaking extends itself into three volumes; nevertheless, having regard to the present-day scope of the subject, one can hardly look upon three moderate-sized volumes as anything but a small work. And, then, the essential thing about it is, that it is comprehensive, and practical, furnishing the general practitioner wirh real help; enabling him to do his own surgical work instead of exploiting elaborate surgical specialties and specialists, and is adequate to all his ordinary needs in this line. We gladly welcome it and cordially commend it.

CAMPBELL AND KERR: "SURGICAL DISEASES OF CHILDREN"

The Surgical Diseases of Children. By William Francis Campbell, A. B., M. D., professor of anatomy at the Long Island College Hospital, and LeGrand Kerr, M. D., attending pediatrist to the Methodist Episcopal, Williamsburg, Bushwick, and Swedish hospitals. New York and London: D. Appleton & Co. 1912. Price $6.00.

Any piece of literature on pediatrics to which LeGrand Kerr's name is appended commands attention and respect, and is sure to repay the time and care spent upon its perusal. So it is that we approach this new book in a favorable attitude of mind from the outset, which is greatly enhanced by the quite novel angle from which the joint authors themselves approach their subject.

Hitherto there has been no yielding of the rigid dividing line between the purely medical aspect of pediatrics and plastic, corrective surgery, between diseases of children and orthopedics. Yet, it must be well recognized that between these two there lies a large and important field of general surgical pathology and treatment peculiar to the anatomy and function of the child, one that has not heretofore been accorded its proper exploitation. It is this task that Drs. Kerr and Campbell have set themselves, and they have acquitted themselves excellently.

The work must be regarded, of course, largely as a tentative breaking of new ground. But, even so, it is a pretty complete piece of work and covers the ground with praiseworthy thoroughness. The family physician (to whom, by the way, it is dedicated), will find it especially helpful and instructive.

DeLEE: "OBSTETRICS"

Principles and Practice of Obstetrics. By Joseph B. DeLee, A. M., M. D., professor of obstetrics at the Northwestern University Medical School; obstetrician to the Chicago Lying-In Hospital and Dispensary, and to Wesley and Mercy hospitals; consulting obstetrician to Cook County and Provident hospitals. With 913 illustrations, 150 of them in colors. Philadelphia and London:

The W. B. Saunders Company. 1913. Price $9.50.

When Dr. DeLee published his "Obstetrics for Nurses" a few years ago, we wondered—and expressed our surprise in a letter of congratulation to the author—that he did not extend the title to include the practitioner of medicine, since it seemed to us that the book was fully adequate for the needs of the physician. Now we see why he did not do this: he was reserving for the physician this yet more excellent presentation of the subject. This work was well worth the waiting. We do not believe that either this country or Europe has anything more complete or more classical in the way of a textbook of obstetrics—it might well be called The New Obstetrics.

The author himself, as everyone who knows him is aware, has been one of the most active and intelligent frontiersmen on the advance-line of modern, scientific obstetrics; and his book embodies all that he has achieved in this direction, and all that progressive men elsewhere have contributed to the perfection of the art.

The division of the work into its four fundamental phases, namely, the physiology, conduct, pathology, and surgery of obstetrics, is a most happy and illuminative arrangement. The entire book, in its every feature, touches the high-water mark. The author's half-apology for avoiding polemic discussion "at the risk, perhaps, of being too dogmatic" is quite unnecessary. Such an attitude is altogether in accord with the spirit and need of the times.

HERMAN AND MAXWELL: "DISEASES OF WOMEN"

Diseases of Women. A Clinical Guide fo Their Diagnosis and Treatment. By George Ernest Herman, M. D., consulting obstetric physician to the London Hospital. Enlarged edition, revised by the author, assisted by R. Drummond Maxwell, M. D., assistant obstetric physician to the London Hospital. With 8 colored plates and 292 figures in the text. New York: The Funk and Wagnalls Company. 1913. Price $7.50.

In this second edition of his work, the author, as he himself announces in the preface, has changed the motif and purpose from a specific to a generic charaeter. In the former editions, as he says, he set forth the methods of operating which he himself had practiced and found good. In this edition, he has attempted to reflect the acts and opinions of the gynecological world at large, to which task he confesses he was obliged to call the aid of a younger man who was in a position to watch the practice of many different operators.

We cannot help feeling that herein the author has ıade a lamentable mistake. As a specific contribution of his own personal experience, his book had a value that was correspondingly specific and determinate. As a general textbook of gynecology, it must be comfessed, it dissipates its individual strength, and fails in competition with other and better works of this broader character.

We think it a great pity that Dr. Herman was seized with such a spirit of diffidence and self-depreciation. The medical world would have welcomed with a good deal more enthusiasm an edition of the book which, instead of dispersing the individual element, had intensified and strengthened it. All of which, however, does not imply that the work, in its present shape, has no intrinsic merit. It is, when all is said and done, a painstaking, practical, up-to-date presentation of the subject.

BOOKS RECEIVED

Die Klinik der Tuberkulose. Handbuch der Gesamten Tuberkulose für Aerzte und Studierende. Von Dr. B. Bandelier und Dr. O. Roepke. Zweite vermehrte und verbesserte Auflage. Würzburg: Curt Kabitzsch. 1921. Price Mk. 15.00.

Lehrbuch der Spezifischen Diagnostik und Therapie der Tuberkulose. Für Aerzte und Studierende. Von Dr. Bandelier und Dr. Roepke. Mit 19 Temperaturkurven auf 5 lithographischen Tafeln, 1 farb. Lith. tafel und 5 Textabbildungen. Sechste vermehrte und verbesserte Auflage. Würzburg: Curt Kabitzsch. 1911. Price Mk. 7.80.

Tuberculin Treatment. (Oxford Medical Publications.) By Clive Riviere, M. D., F. R. C. P., and Egbert Morland, M. B., B. Sc., M. D. New York: Oxford University Press. 1912. Price $2.00.

Consumption in General Practice. (Oxford Medical Publications.) By H. Hyslop Thomson, M. D., D. P. H. New York: Oxford University Press. 1912. Price $5.50.

Rational Organotherapy; with Reference to Urosemiology. By Dr. A. von Poehl, Dr. Prince J. von Tarchanoff, Dr. Alf. von Poehl, and Dr. P. Wachs. Translated from the Russian text. Volume I. London: J. & A. Churchill. 1906. Price sh. 7/6 net.

CONDENSED QUERIES ANSWERED

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWER TO QUERIES

ANSWER TO QUERY 5908.—"Tinea Circinata." Your correspondent T. D. F., in the May number of THE CLINIC (p. 461) writes of the poor success he has had with the usual remedies in the treatment of tinea circinata, or ringworm. Here is a simple remedy with which I became acquainted during my childhood. At that time such a ringworm made its appearance on the side of my face and it resisted all the usual remedies. Finally a good old granny helped me. She burned a small wad of linen rags on the side of an ax, then blew off the resulting ash, when there remained a spot of moisture, which she called the "sweat of steel." This moisture was applied to the ringworm, making, of course, a dark-colored smudge. This was left on for the day, when it was washed off. Sometimes a second application may be required, but it will do the trick. I have seen this treatment tried several times and never have seen it fail of effecting a cure.

G. D. S.

Stonington, Conn.

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ANSWER TO QUERY 5917.—"Diagnosis of Variola." With regard to question No. 1, as to whether there are any positive signs or indications that aid early in discriminating accurately, positively the discrete form from chicken-pox of an aggravated type, I wish to offer a few suggestions. The intense backache, headache, and the severe chill preceding the eruption of variola is sufficient to dispel any doubt as to its being the forewarning of an invasion of that disease, rather than that of chicken-pox. The chill just preceding the eruptions of variola is something long to be remembered. (I have been there!)

The prodromes accompanying the manifestations of the two diseases are as different as chalk is from cheese. The very marked rise in the temperature immediately following the chill, or succession of chills, characterizing the invasion of variola is so much more pronounced than in chicken-pox (where chills practically are absent) as to leave no room for doubt as to the true nature of the disease in question. Immediately after a patient has had one of those severe chills, with the accompanying intense headache and backache and before any pustules or an eruption have appeared on the surface, if the physician will pass his fingers gently over the patient's face and chin, he will detect the presence there of what feels like numerous birdshot just under the skin—particularly about the chin. I have always found this characteristic sign. When the pustules appear on the surface and finally become vesicular, their invariable umbilicated appearance is sufficient to distinguish the vesicles from those of chicken-pox, which never present that appearance.

Question 2. "Does the discrete form protect or immunize a person from the malignant smallpox? I think it does in ninety-nine percent of cases. I had one case of the malignant form, or "black" smallpox, as it was termed, that proved fatal, where the patient was nursed by a man who had had varioloid many years before; and he proved to be immune from a second attack.

I recall one case of varioloid in which there was no visible eruption. The prodromes were so characteristic of variola that I told the patient that, if he had any pustules or vesicles, I should pronounce it varioloid. In due time, however, three other members of his family were stricken with the disease, two of the cases being of the confluent variety, the third of a milder type. Subsequently I examined the man who had varioloid symptoms, finding two pox-marks on his back.

In this connection, I will state that the prophylactic value of vaccination has proven,

in my practice, to be of inestimable value. I will mention one case, where one member of a family of seven (father and mother and five children of school-age) came down with the confluent smallpox. The parents had been vaccinated years before, but none of the children had been. The premises did not admit of segregating the well from the sick one. I vaccinated them all-around, repeating this daily until I was sure that the vaccine had taken. This procedure forestalled its further outbreak in the family. There was an interesting climax to this case, which with your permission I will here relate.

It was a case in which the victim was cared for by me at the request of the civil authorities of the town. As there was only one case in the family of seven, the town-fathers doubted my diagnosis and refused to pay my bill. I abided my time, and when my patient had fully recovered and had been "duly and truly prepared," I presented him before the aldermen at their regular session. They did not suspect that the lad accompanying me was the patient in question. When the opportunity afforded, I had the boy stripped as naked as he was born, and, as it was a cold, raw day in February, he showed up beautifully. "There, gentlemen, is the patient," said I. They took one look, then exclaimed with one accord: "For God's sake, doctor, take that young'un out of here—we will pay your bill." The bill was paid, but I charged five dollars extra for my extra trouble, and this they paid without a demur.

GEORGE D. STANTON.

Stonington, Conn.

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ANSWER TO QUERY 5924.—"Hydrocephalus." A. P. Freund, Victoria, B. C., writes us that he recalls reading about the method of treating hydrocephalus, such as was referred to in this query. The treatment consisted in exposing the lower part of the back of the head to the sun's rays for long periods, the remainder of the body being protected. Can anyone else give us any further information upon this subject?

QUERIES

QUERY 5925.—"Catarrhal Gastritis, Ulcus Gastrica, etc." S. D. D., Pennsylvania, writes: "Please name some preparations that have done good work in gastric catarrh, catarrhal conditions of stomach, ulcers in stomach, etc. Are saline laxatives desirable in these conditions?"

The terms "gastric catarrh and "ulcer of the stomach" cover a vast variety of conditions, and cannot be considered offhand, in bulk. The success of the positive therapeutist, it should be remembered, is owing to the fact that he recognizes the pathological conditions present in the individual and administers the indicated remedies therefor in small repeated doses to effect.

In catarrhal conditions of the gastric mucosa, juglandoid, hydrastoid, eupurpuroid, and hamameloid are of value. Frequently indicated for the accompanying indigestion are: betaine-pepsin (betaine hydrochloride, grs. 2; pepsin, gr. 1; papain, gr. 1-2); and, also, such combinations of papain and pepsin as (1) papain, gr, 1; pepsin, gr. 1; berberine hydrochloride, gr. 1-32; strychnine sulphate, gr. 1-128; or (2) papain, gr. 1-3; charcoal, gr. 1; sodium bicarbonate, gr. 2-3; or (3) pancreatin, gr. 1-2; papain, gr. 1-2; diastase, gr. 1-2; bilein, gr. 1-32; strychnine sulphate, gr. 1-128; ginger, gr. 1-4; charcoal, grs. 2 1-2; sodium bicarbonate, gr. 1.

A good preparation of calendula has given excellent results in this writer's practice, and proper dieting, lavage, massage, and the sinusoidal current usually are beneficial.

In order to secure definite results, it is desirable, as a rule, to give the patient an Ewald or Boas test meal, and have the stomach contents withdrawn one hour later and examined by a competent pathologist.

In gastric ulcer, pain is most apparent after ingestion of food. Frequently there is blood in the vomitus. Examination of stomach contents is essential if the diagnosis is uncertain. Lavage, rest in bed, rectal feeding in fever cases, condurangin, and chelidonoid, with silver oxide as alternants to heal the ulcer and improve the tone of the mucosa. Hydrastoid may be added, 1-3 of a grain, every three hours. A resorcinated aqueous preparation of calendula is useful. Bismuth and cerium oxalate compound, bismuth subgallate, hamameloid, creosote carbonate (cautiously) also are useful remedial agents. Arsenous acid may be given in the early stages. Hyoscine, morphine and cactoid, cannaboid, codeine or hyoscyamine for anodyne effect.

Hyperacidity must, of course, be controlled, and digestion, of such food as is allowed, assured by the use of indicated digestants. Lavage with a solution of methylene-blue, 1 : 1000, and isarol, 2 or 3 minims, in cinnamon-water, internally, every three hours, is excellent treatment in robust or ambulant patients. Galactenzyme, two to four tablets with food, is helpful. Coli-bacterin, every two or four days. Surgical procedure often is necessary.

Laxative salines may be given advantageously in some cases. They are not desirable, as a rule, however, if ulcer is definitely known to exist; under such circumstances, the withholding of food for at least forty-eight hours is essential; the strength of the patient being maintained by nutrient enemata.

In acute gastric catarrh, the intestinal canal should be emptied and the stomach put at rest by the abstinence from food until the inflammatory condition has subsided.

In the chronic condition, we usually have to deal with a reduction of hydrochloric acid and ferments, the accumulation of mucus, and a deficiency of motility. As we have already pointed out, the presence or absence of hydrochloric acid must be definitely determined.

Give us a clearer idea of conditions present in any particular case, and we shall be much pleased to aid you to the extent of our ability.

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QUERY 5926.—"Perhaps He Drinks Bromo-Seltzer to Excess?" C. M. B., Missouri, submits this poser: "What would kill this man? Age, 42 years; weight, 245 pounds, weighed 121 pounds when he was 20 years old. Has taken bromo-seltzer for twenty-eight years, often as many as fifteen small bottles in one day, frequently three 25-cent bottles a day. Would buy it by the gross. Smoked 40 cigars per day, and drank 2 quarts of whisky. Has cut down the cigars and whisky, but still takes the bromo-seltzer. Pulse, about 90, regular; looks the picture of health. Takes the 'bromo' for headache."

We should be inclined to think that despite the appearance of "perfect health," your patient will succeed in killing himself if he persists in his consumption of bromo-seltzer. This certainly is one of the most remarkable cases we have heard of, and it would be interesting to know whether the man smokes the 40 cigars to overcome the effects of the bromo-seltzer, or takes the bromo-seltzer as an antidote for the nicotine poisoning.

His headache probably is due to autotoxemia. If the man is really desirous of getting rid of the bromo-seltzer, whisky, and tobacco habits, we should place him in charge of a thoroughly reliable, firm nurse; cause thorough elimination; and push avenine and passiflora, with nuclein and lecithin.

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QUERY 5927.—"Pellagra. Indurations in Mammæ." L. W., Texas, wishes to be referred to journals or books containing articles on pellagra. He has a patient who, he thinks, has pellagra. The subject is a woman about 33 years of age. About a year ago last spring she had a "redness and soreness" on the backs of her hands. This was treated by another physician, and it finally disappeared.

"This spring the hand trouble reappeared, and with it more pronounced symptoms. She had pains all over her body, looseness of the bowels, great debility and nervousness; the pulse is weak. The mucous membranes look pallid. There was some congestion of the throat when the patient was first seen. The mouth has not been sore yet, though she has since then complained of a stiffness of the tongue. On some days she complains of her hands hurting her when they hang down, and this is less pronounced on some days than on others. She has no appetite, but manages to take some food each day. The urine at first was very deficient, not more than 60 ounces in twenty-four hours, but by drinking more fluid (she had been taking but little before), it has been brought up to something like normal.

"She has received bismuth subgallate for the diarrhea and sodium sulphate for the intestinal putrefaction; triple arsenates and cactoid, to steady the pulse and act as a reconstructant. Dr. Bowling's method of treatment with castor oil and chlorine-water and calcium sulphide will be tried.

"Next: What should be the normal condition of the mammary gland in a woman 46 years of age? In a woman examined lately, the milk-ducts appeared hard and somewhat bunched together, but there was no "lump." She has not passed the menopause and is still menstruating—sometimes too much so. No evidences of carcinoma are found.

"What drug best checks uterine bleeding or too profuse menstruation? Hydrastinine is too expensive to use much."

The article by Mizell, on the treatment of pellagra, which appeared in CLINICAL MEDICINE for November, 1911; and the editorial, page 821, August issue, 1911, are the most important contributions on the subject which have yet appeared in current literature. Other articles which have appeared are:

"The Treatment of Pellagra," by Dr. E. H. Bowling, CLINICAL MEDICINE, November, 1911; "The Diagnosis and Treatment of Pellagra," by J. W. Torbett, CLINICAL MEDICINE, December, 1910; and "The Treatment of Pellagra," by Dr. J. E. Knight, CLINICAL by Dietetic Treatment," by Dr. C. S. Pixley, MEDICINE, August, 1912, and "Pellagra Cured June, 1913.

The pathology of pellagra, as hardly need be stated, is not yet thoroughly understood, and it is, therefore, difficult to outline a treatment which would prove effective in all cases, though the saturation of the patient with calcium sulphide and the exhibition of the sulphocarbolates and nucleinated phosphates in large doses have been strongly recommended. Several Georgia physicians have had excellent results from the use of gelsemium.

You might advantageously write to Surgeon-General Blue, Public Health Service, Washington, D. C., for literature on the subject. We would also refer you to the numerous articles by C. H. Lavinder which have appeared in the *Bulletin of the Public Health and Marine Hospital Service*, also to articles by Dr. C. S. Pixley in *The Charlotte Medical Journal*.

We trust you will keep careful clinical notes and report your experience with the patient now under observation.

The condition of the mammæ in women of middle age varies materially, but any hardness or "bunching" is suspicious. Cancer frequently appears as the outcome of changes in tumors, theretofore benign.

As you know, in most cases the cancer springs from the epithelium lining the acini or the epithelium lining the ducts, progressing by general infiltration. Scirrhus cancer, especially growing slowly (frequently not becoming obvious for two or three years), appears usually after middle life. Frequently pain of lancinating or shooting character first attracts the woman's attention to the part, though she may have been aware for some time that a "lump" existed in her breast. Such "lumps" always must be regarded with suspicion, no matter what the age of the patient; and the physician must not be misled if the indurated area is found in the detached portion of the gland lying high toward the axilla.

A cancer small and deeply placed is always fixed; it is not encapsulated; therefore cannot be moved about. It may not be felt by the examining hand lifting the breast in front, and therefore the doctor should stand behind the sitting patient and, with his hand over her shoulder, should, under his fingers, roll the breast flattened against the chest, when frequently he will detect an infiltrating mass otherwise unobservable.

Axillary nodes should always be sought for. The doctor should sit before the patient (whose arms should be raised), his fingers being pressed high into the axilla and palm of hand against chest.

A positive diagnosis can be made only upon the evidence of tumor, pain, and involvement of lymph-nodes. Bear in mind that the characteristic cachexia appears late.

In this connection, we reproduce for your information our answer to a recent letter received from a physician who desired information relative to the importance of "lumps" in the breast.

"The character of the 'lump in breasts' must, of course, be ascertained. If you will give us a clear idea of their character, location, length of time they have been present, we may be able to make some definite therapeutic suggestions. Are the indurations freely movable or is overlying skin adherent? What is the general condition of the patient? Has she borne children?"

"Phytolaccoid and irisoid are perhaps the most useful and generally indicated remedies, with calx iodata or arsenic iodide as alternates.

"Many new growths are to be found in the breast—some of them benign; some of them doubtful; some of them truly malignant. Fibroma is common, but it is not always easy to differentiate in the early stages from sarcoma; as a matter of fact, fibromata, myxomata, and sarcomata are closely allied.

"Periductal fibromata of the breast are encapsulated tumors, which may vary in size from a bean to a coconut. Are most commonly found in women between twenty and thirty. They are painless, grow slowly; and are usually found in the upper outer quadrant of the breast.

"Myxomata differ little in structure from fibromata, but are likely to be larger; are observed more frequently in women of middle age; frequently contain cavities.

"Sarcoma (periductal) is most common in women over forty years who have borne children. The tumors become hard and large, involving the whole breast; they ulcerate, and the overlying skin is reddened and traversed by dilated veins.

"Fibrous adenomata are found in young single women, usually. They are lobular, quite hard and movable, varying in size from

a walnut to an orange. They grow slowly and cause no pain.

"Retention-cysts, tuberculous nodules or mastitis may cause the appearance of 'hard lumps.' It must not be forgotten that the first sign of cancer is frequently a painless lump, usually located near the nipple, but occasionally lying high up toward the axilla; deeply seated small cancers are fixed, cannot be moved. As the disease advances, the skin becomes adherent and pitted, the nipple retracts frequently, and about this time ulceration is likely to occur, and enlarged nodes in the axilla become apparent.

"It is essential that malignant growths of the breast be recognized early; the only effective treatment is radical operation."

Atropine and hydrastinine hydrochloride most effectively control uterine hemorrhages. Give atropine, to control the condition, then follow with hydrastinine, with, perhaps, stypticin as alternate, to maintain the effect. In every case, of course, the cause must be discovered, and removed as rapidly as possible.

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QUERY 5928.—"Camphor-Chloral and Phenol Combinations." D. I. S., Ohio, desires practical directions for compounding the following combinations:

No. 1. Phenol and camphor, combined, of course, to prevent the caustic effect of the carbolic acid. [Carbolic acid, better "phenol," should never be referred to as an "acid," for it is not such.—ED.] No. 2. Chloral hydrate and camphor. No. 3. Oil of mustard, chloral hydrate, and lanolin, combined to prevent the oil of mustard from blistering.

Equal parts of phenol and of camphor (or 2 parts of camphor) should be rubbed together in a mortar. The resultant liquid may be used "pure," even on extensive wounds, or it may be reduced by the addition of petrolatum or some bland oil. We prefer to use the full-strength mixture.

Other combinations of crystalline substances liquefying with camphor are as follows: Triturate together equal parts of (1) camphor and chloral hydrate, (2) camphor and menthol, (3) camphor and thymol, or (4) 2 parts of camphor and 1 part of betanaphthol, or (5) 2 parts of camphor and 3 parts of salol. Chloral hydrate is soluble in oils, fats, and glycerin. It is well to remember that camphor may be reduced to a powder by rubbing it up with a few drops of alcohol.

For the sinapis prescription, we suggest to combine (in a warm mortar dipped in hot water and wiped) chloral hydrate and menthol, 1-2 to 1 dram of each, then gradually incorporate 1 ounce of lanolin, lastly adding 5 to 10 drops of oil of mustard. You will have to feel your way with this formula.

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QUERY 5929.—V. S. B., Connecticut, has under his care a woman 71 years of age whose perineum is torn nearly to the sphincter ani. She has had attacks of uterine bleeding at intervals during the last eight months, these increasing somewhat in frequency and amount. Besides this metrorrhagia, she has a constant foul-smelling yellowish vaginal discharge resembling pus. "The cavity of the uterus," our correspondent continues, "is about 3-4 of an inch longer than normal, and the endometrium is soft and bleeds profusely at the slightest touch. No tumor can be discovered, but the patient is a fleshy woman and, consequently, difficult to examine. Her tongue has been heavily coated since she has come under observation, but it is not nearly as foul now as at first. The patient also has a spasmodic cough of twenty years' standing, which resists all medical treatment. She thinks this cough is the cause of her hemorrhages, as any violent effort renews the trouble. Her temperature in the afternoon has ranged from 99.5° to 101° F.; the pulse, from 80 to 100."

Our correspondent suspects cancer of the uterus and asks for treatment.

We are inclined to think that surgical procedures alone will prove effective here; it is just possible that you have a malignant condition to deal with. A specimen of the vaginal discharge, by all means, should be sent to a laboratory pathologist. It would also be well to secure a small portion of the endometrium and forward it at the same time.

You can probably control the cough by pushing calx iodata; and, guaiacol carbonate with lactucarium compound, or collinsonoid, as alternates, in 1-6-grain doses.

Pending the report on the specimens, we suggest that you cleanse the vaginal canal with copious hot alkaline antiseptic douches, then (with a swab) apply to the cervix a mixture of iodine, carbolic acid, and boroglyceride. A good formula for this is: iodine, 30 grains; phenol, 1 dram; boroglyceride, 2 drams; glycerin, 4 ounces. Or you may use carbenzol, diluted with equal parts of olive oil and liquid petrolatum. Churchill's solution may then be applied to the endometrium.

It is essential, of course, to differentiate between senile endometritis and cancer of the uterus. In the former condition, the

discharge continues indefinitely, unless radical measures are instituted. Such treatment consists in dilation of the uterus and removal of the entire endometrium with a sharp curette. After the cavity has been curetted, the denuded surface is cauterized with pure carbolic acid, care being taken to protect the vagina by packing gauze around the cervix. The uterus should then be irrigated with an alkaline solution. This writer is in the habit of first neutralizing the phenol with alcohol before irrigating.

It is necessary, of course, to secure thorough elimination and to improve nutrition.

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QUERY 5930.—"Bust Developers, Flesh Builders, etc." L. D. N., Kentucky, requests us to "give in full the treatments described in the usual advertisements as 'bust developers,' 'flesh builders,' 'depilatories,' etc." He has patients who demand that "the doctor do something or acknowledge his inferiority to the quacks."

Superfluous hair is easily removed, of course, by the use of a good depilatory, but such preparations can only destroy the free hair itself. Any chemical potent enough to destroy the hair-bulb must injure the skin and irreparably damage the surrounding tissues. However, the standard depilatory powder, if used as directed, will destroy the hair and the subsequent growth will be less vigorous; hence, in most of cases, after a time a lanugo-like growth alone persists.

It must be borne in mind, though, that hair growing in abnormal locations is more readily destroyed than unusually luxuriantly growing hair in normal areas. For instance, long dark hair upon the lip and chin of women can be destroyed permanently only by electrolysis.

Bust development may be secured by the ingestion of fat-forming foods; massage of the glands; inunctions, as with lanolin and coconut oil; and graduated exercise designed to develop the surrounding muscles. The use of the vacuum-apparatus is not advisable.

We cannot express a definite opinion relative the efficacy of the "flesh-forming" preparation named. It is a very certain fact, however, that some people will remain thin, no matter how "fattening" their diet may be. The only rational procedure is to study carefully the individual, correct the underlying disorders of the body-chemistry, regulate the diet, and insure nutrition. Most thin people are autotoxemic; this condition corrected, place them upon a well-balanced ration, and their weight usually will increase. Naturally, if the skin is kept active and the muscles exercised (normally or by massage or vibration), poorly developed parts will fill out.

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QUERY 5931.—"Hyperacidity and Nephrolithiasis." P. H. P., Ohio, forwards a specimen of urine from a married female, age thirty-three, and asks for diagnosis and treatment. The patient had typhoid fever ten years ago, recovery from which was complete, and she enjoyed good health. Of late, she was seized with cramps across the region of the bladder and groins. The pain was so severe that perspiration broke out, and it lasted about four hours, then gradually abated, leaving the patient very weak for two or three days. The urine that is forwarded was voided the morning following the attack. The kidneys are not very active; there is some little tenderness over the stomach, possibly from the pain; the bowels seem normal; she is now able to sit up and seems to be convalescing nicely. This is the third attack, one occurring about six weeks ago and the first one several months ago. No blood appeared in the urine before; this last attack being much more severe than others.

Your patient suffers from marked hyperacidity, very many uric-acid crystals being present in the specimen of urine submitted.

Unfortunately we do not know the total amount of urine voided in twenty-four hours, and therefore are unable to estimate the total output of solids and urea. It is impossible, of course, for us to venture a definite opinion as to the presence of calculi, or their location, should they exist, but it is more than probable that the attacks described were caused by the passage of concretions through the ureter, and calculi may be present in the renal pelvis.

Bransford Lewis, of St. Louis, in the April number of *The American Journal of Surgery*, describes three cases of multiple stones in the kidney, with a symptomatology of from thirteen to thirty years. He says: "Put no faith in symptoms, but trust in reliable returns given by searching physical examination, including the modern methods of internal inspection and investigation. In each of these cases, all the medical talent available was utilized in consultations and treatment, but to no purpose. It was always opinion and treatments, but never a diagnosis." The x-ray revealed the presence of nearly a dozen calculi in each patient, and after nephrectomy the patients recovered, subsequently enjoying better health than they had for years.

Try arbutin, and calcium and lithium carbonates in full doses and a laxative saline draught each morning upon rising.